



# STIC Search Report

## Biotech-Chem Library

STIC Database Tracking Number: 147801

**TO:** Emily M Le  
**Location:** 3c35/3c18  
**Art Unit:** 1648  
**Tuesday, March 22, 2005**

**Case Serial Number:** 10/764356

**From:** Noble Jarrell  
**Location:** Biotech-Chem Library  
**Rem 1B71**  
**Phone:** 272-2556

**Noble.jarrell@uspto.gov**

### Search Notes

P.3-8, from APP

8,12,36

73- first 10 of seq 3 in HCA plus

Search Notes

147801

Jarrell, Noble

**From:** Le, Emily  
**Sent:** Monday, March 14, 2005 6:30 PM  
**To:** Jarrell, Noble  
**Subject:** Sequence Search: 10/764356

Noble,

Please provide a sequence search for the following:

1. cdafcscirgkr
2. cdafcscsrgkv
3. rgk

please also provide an STN text search of item nos. 1-2 with HIV as the keyword.

Thanks, Noble!

Emily Le  
Office, Rem 3C35  
Mailbox, Rem 3C18  
Tel., 2-0903

Noble

fin 3/22/05

101 REP

320NL

15671 5RU

4 STR

=> d his

(FILE 'HOME' ENTERED AT 09:38:10 ON 22 MAR 2005)

FILE 'HCAPLUS' ENTERED AT 09:38:16 ON 22 MAR 2005

E REID P/AU

L1 122 E3-15  
E REID PAUL/AU  
L2 41 E3-9  
E RAYMOND L/AU  
L3 84 E3-12  
E RAYMOND LAWRENCE  
E RAYMOND LAWRENCE/AU  
L4 13 E3-7  
L5 0 L1-2 AND L3-4  
E HIV/CT  
E E3+ALL  
E E2  
E 3+ALL  
E HUMAN IMMUNODEFICIENCY VIRUS/CT  
E E3+ALL  
L6 45631 HUMAN IMMUNODEFICIENCY VIRUS+OLD, NT/CT  
L7 16614 ANIMAL VIRUS+OLD/CT (L) (AIDS (1A) RETRO? OR HUMAN (1A) IMMUNOD  
E E20  
E E3+ALL  
L8 16127 "AIDS (DISEASE)"+OLD, NT/CT  
E IMMUNODEFICIENCY/CT  
E E3+ALL  
L9 16133 IMMUNODEFICIENCY+NT/CT (L) (ACQUIRED (1A) IMMUNE (1A) DEFIC? (1  
L10 1 L1-4 AND L6-9

FILE 'REGISTRY' ENTERED AT 09:45:34 ON 22 MAR 2005

FILE 'HCAPLUS' ENTERED AT 09:45:35 ON 22 MAR 2005

L11 TRA L10 1- RN : 2 TERMS

FILE 'REGISTRY' ENTERED AT 09:45:36 ON 22 MAR 2005

L12 2 SEA L11

FILE 'WPIX' ENTERED AT 09:45:41 ON 22 MAR 2005

E REID P/AU

L13 73 E3-18  
E RAYMOND L/AU  
L14 30 E3-9  
L15 2 L13 AND L14

=> b hcap

FILE 'HCAPLUS' ENTERED AT 09:47:01 ON 22 MAR 2005

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FILE COVERS 1907 - 22 Mar 2005 VOL 142 ISS 13  
FILE LAST UPDATED: 21 Mar 2005 (20050321/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all 110 tot

L10 ANSWER 1 OF 1 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 2001:713091 HCPLUS  
DN 135:262241  
ED Entered STN: 28 Sep 2001  
TI Immunokine composition and method for preventing HIV infection  
IN Mundschenk, David D.; Reid, Paul F.  
PA Phylomed Corporation, USA  
SO PCT Int. Appl., 54 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K  
CC 63-6 (Pharmaceuticals)  
FAN. CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001070173	A2	20010927	WO 2001-US8150	20010314
	WO 2001070173	A3	20020314		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2404078	AA	20010927	CA 2001-2404078	20010314
	AU 2001049194	A5	20011003	AU 2001-49194	20010314
	EP 1272512	A2	20030108	EP 2001-922384	20010314
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003211465	A1	20031113	US 2002-292164	20021112
PRAI	US 2000-533454	A	20000323		
	US 1996-644399	B1	19960510		
	US 1997-908212	A1	19970807		
	US 1999-368834	A2	19990805		
	WO 2001-US8150	W	20010314		

CLASS  
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2001070173	ICM	A61K
US 2003211465	ECLA	A61K038/17A; C07K001/113B; C07K014/46
AB	A composition and method for preventing HIV infection of mammalian cells is disclosed. One aspect of the invention relates to an anti-immunodeficiency virus immunokine capable of binding to a cellular protein in a manner that prevents HIV infection of that cell. The compns. can include either an active bioactive polypeptide, such as native cobra toxin, and/or an inactivated bioactive polypeptide, such as cobra toxin in which one or more of the native disulfide bridges have been prevented from	

forming. The term "immunokine" is used to refer to an inactivated bioactive polypeptide, whether inactivated by chemical, genetic, and/or synthetic means as described herein, with the proviso that a corresponding active bioactive polypeptide can be included where applicable (e.g., for in vitro use).

ST immunokine compn HIV virustat cobra toxin

IT Antigens  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (CCR5, ligands; immunokine composition and method for preventing HIV infection)

IT Antigens  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (CXCR4, ligands; immunokine composition and method for preventing HIV infection)

IT Receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (for HIV; immunokine composition and method for preventing HIV infection)

IT Immunity  
 (humoral; immunokine composition and method for preventing HIV infection)

IT Antiviral agents

Disulfide group

Drug delivery systems

Feline leukemia virus  
 Human immunodeficiency virus  
 Human immunodeficiency virus 1  
 Human immunodeficiency virus 2

Molecular cloning

Simian immunodeficiency virus

Venoms  
 (immunokine composition and method for preventing HIV infection)

IT Toxins  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (immunokine composition and method for preventing HIV infection)

IT RNA  
 RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)  
 (isolation of; immunokine composition and method for preventing HIV infection)

IT CD4 (antigen)  
 Chemokine receptors  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ligands; immunokine composition and method for preventing HIV infection)

IT Toxins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (neurotoxins; immunokine composition and method for preventing HIV infection)

IT Synapse  
 (postsynapse, toxins affecting; immunokine composition and method for preventing HIV infection)

IT Conformation  
 (protein; immunokine composition and method for preventing HIV infection)

IT Genetic engineering  
 (toxin modification by; immunokine composition and method for preventing HIV infection)

IT Ion channel  
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
 (toxins affecting; immunokine composition and method for preventing HIV infection)

IT Naja naja siamensis  
 (venom of; immunokine composition and method for preventing HIV infection)

IT 10028-15-6, Ozone, biological studies  
 RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
 (toxin modification by; immunokine composition and method for preventing HIV infection)

IT 12584-83-7, Cobrotoxin  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (.alpha.-chain of; immunokine composition and method for preventing HIV infection)

=> b reg

FILE 'REGISTRY' ENTERED AT 09:47:09 ON 22 MAR 2005  
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STRUCTURE FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1  
 DICTIONARY FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d ide 112 tot

L12 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 12584-83-7 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Cobrotoxin (8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cobrotoxin (reduced) cyclic (3.fwdarw.24), (17.fwdarw.41), (43.fwdarw.54), (5  
 5.fwdarw.60)-tetrakis(disulfide)  
 FS PROTEIN SEQUENCE  
 DR 12769-46-9  
 MF C277 H435 N97 O98 S8  
 CI MAN  
 LC STN Files: BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CSCHEM,  
 DDFU, DRUGU, EMBASE, IPA, MRCK\*, NAPRALERT, PROMT, RTECS\*, TOXCENTER,  
 USPATFULL  
 (\*File contains numerically searchable property data)

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

\*\*\* USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE \*\*\*

203 REFERENCES IN FILE CA (1907 TO DATE)

12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

203 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L12 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN

RN 10028-15-6 REGISTRY

ED Entered STN: 16 Nov 1984

CN Ozone (8CI, 9CI) (CA INDEX NAME)

## OTHER NAMES:

CN Atmospheric ozone

CN Oxygen, mol. (O3)

CN Ozone (O3)

CN Ozone(160160160)

CN Triatomic oxygen

DR 728855-47-8, 74087-86-8, 412908-40-8

MF O3

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOPHARMA, BIOSIS, BIOTECHNO, CA, CABAB, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSNB, DDFU, DETHERM\*, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

0-0-0

## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

56858 REFERENCES IN FILE CA (1907 TO DATE)

78 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

56905 REFERENCES IN FILE CAPLUS (1907 TO DATE)

2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=&gt; b wpix

FILE 'WPIX' ENTERED AT 09:47:25 ON 22 MAR 2005

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FILE LAST UPDATED: 21 MAR 2005 &lt;20050321/UP&gt;

MOST RECENT DERWENT UPDATE: 200519 &lt;200519/DW&gt;

DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
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[<<<](http://thomsonderwent.com/coverage/latestupdates/)

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PLEASE CHECK:  
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FOR DETAILS. <<<

=> d all 115 tot

L15 ANSWER 1 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
AN 2005-141677 [15] WPIX  
DNC C2005-046179  
TI Treatment of pain associated with cancer, neurological conditions,  
rheumatoid arthritis, and viral infections involves use of detoxified and  
neurotropically active modified venom neurotoxin.  
DC B04  
IN RAYMOND, L; REID, P  
PA (RAYM-I) RAYMOND L; (REID-I) REID P  
CYC 1  
PI US 2005031608 A1 20050210 (200515)\* 8 A61K038-48  
ADT US 2005031608 A1 US 2003-636458 20030806  
PRAI US 2003-636458 20030806  
IC ICM A61K038-48  
ICS A61K038-46  
AB US2005031608 A UPAB: 20050303  
NOVELTY - Treatment of pain involves administering detoxified and  
neurotropically active modified venom neurotoxin.

ACTIVITY - Analgesic. A 36 year old human male with a history of oral  
herpes (herpes simplex type 1) assessed the effects of parenterally  
administered oxidized alpha -cobratoxin on oral lesions. The subjected  
discovered that the injection of the drug reduced pain associated with  
nasal or labial herpetic lesions when administered at the first indication  
of a prodrome. Also noted was a reduction in the usual size of the lesion  
and healing period with continued administration consistent with  
observations in other clinical studies on herpes virus.

MECHANISM OF ACTION - Acetylcholine receptor binders.

USE - For the treatment of pain (associated with cancer, neurological  
conditions, degenerative bone diseases, rheumatoid arthritis and viral  
infections).

Dwg. 0/0

FS CPI  
FA AB; DCN  
MC CPI: B04-B04G; B04-F11; B14-C01

L15 ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
AN 2004-708707 [69] WPIX  
DNC C2004-249924  
TI Treatment of animals suffering from neurological disorders, e.g. multiple  
sclerosis, by administration of dosage of detoxified and neurotropically  
active modified alpha-neurotoxin composition which targets nicotinic  
acetylcholine receptors.  
DC B04  
IN RAYMOND, L; REID, P  
PA (RAYM-I) RAYMOND L; (REID-I) REID P

CYC 1  
PI US 2004192594 A1 20040930 (200469)\* 12 A61K038-16  
ADT US 2004192594 A1 Provisional US 2002-351462P 20020128, US 2003-352335  
20030127  
PRAI US 2002-351462P 20020128; US 2003-352335 20030127  
IC ICM A61K038-16  
AB US2004192594 A UPAB: 20041027

NOVELTY - Animals suffering from neurological disorders are treated by administering to the animal a disease mitigating dosage of a detoxified and neurotropically active modified alpha -neurotoxin composition which targets nicotinic acetylcholine receptors.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- (a) vaccinating a subject comprising administering to the subject an immunogenic amount of a detoxified and neurotropically active modified neurotoxin composition with(out) the inclusion of an adjuvant; and
- (b) a composition comprising an administrable form of a detoxified and neurotropically active modified snake venom neurotoxin where Naja venom neurotoxin is alpha -cobratoxin and the composition is atoxic.

ACTIVITY - Neuroprotective; Muscular-Gen.

MECHANISM OF ACTION - None given.

USE - For the treatment of animals suffering from neurological disorders, e.g. amyotrophic lateral sclerosis (ALS), other spinal atrophies, multiple sclerosis, myasthenia gravis, muscular dystrophy, leukodystrophies, adrenomyeloneuropathy or ataxias (claimed).

ADVANTAGE - The inventive composition can provide subject neurological condition benefits from improved nerve conduction and modulation.

Dwg. 0/0

FS CPI  
FA AB; DCN  
MC CPI: B04-N02; B04-N03; B05-C07; B10-A22; B14-D01; B14-G01; B14-G02D;  
B14-J02B1; B14-J05; B14-L06; B14-S01; B14-S11

=> b home

FILE 'HOME' ENTERED AT 09:47:31 ON 22 MAR 2005

=>

=> d his

(FILE 'HOME' ENTERED AT 09:38:10 ON 22 MAR 2005)

FILE 'HCAPLUS' ENTERED AT 09:38:16 ON 22 MAR 2005

E REID P/AU

L1 122 E3-15

E REID PAUL/AU

L2 41 E3-9

E RAYMOND L/AU

L3 84 E3-12

E RAYMOND LAWRENCE

E RAYMOND LAWRENCE/AU

L4 13 E3-7

L5 0 L1-2 AND L3-4

E HIV/CT

E E3+ALL

E E2

E 3+ALL

E HUMAN IMMUNODEFICIENCY VIRUS/CT

E E3+ALL

L6 45631 HUMAN IMMUNODEFICIENCY VIRUS+OLD, NT/CT

L7 16614 ANIMAL VIRUS+OLD/CT (L) (AIDS (1A) RETRO? OR HUMAN (1A) IMMUNOD

E E20

E E3+ALL

L8 16127 "AIDS (DISEASE)"+OLD, NT/CT

E IMMUNODEFICIENCY/CT

E E3+ALL

L9 16133 IMMUNODEFICIENCY+NT/CT (L) (ACQUIRED (1A) IMMUNE (1A) DEFIC? (1

L10 1 L1-4 AND L6-9

FILE 'REGISTRY' ENTERED AT 09:45:34 ON 22 MAR 2005

FILE 'HCAPLUS' ENTERED AT 09:45:35 ON 22 MAR 2005

L11 TRA L10 1- RN : 2 TERMS

FILE 'REGISTRY' ENTERED AT 09:45:36 ON 22 MAR 2005

L12 2 SEA L11

FILE 'WPIX' ENTERED AT 09:45:41 ON 22 MAR 2005

E REID P/AU

L13 73 E3-18

E RAYMOND L/AU

L14 30 E3-9

L15 2 L13 AND L14

FILE 'REGISTRY' ENTERED AT 09:48:34 ON 22 MAR 2005

L16 53 (CDAFCSIRGKR|CDAFCSSRGKV)/SQSP

FILE 'HCAPLUS' ENTERED AT 09:49:15 ON 22 MAR 2005

L17 1179 L16

1 L17 AND L1-4

L18 1178 L17 NOT L18

L19 6 L19 AND L6-9

SEL HIT RN L20

FILE 'REGISTRY' ENTERED AT 09:50:02 ON 22 MAR 2005

L21 4 E1-4

FILE 'HCAPLUS' ENTERED AT 09:51:09 ON 22 MAR 2005

SEL HIT RN L18

FILE 'REGISTRY' ENTERED AT 09:51:19 ON 22 MAR 2005

L22 3 E5-7  
 L23 STR  
 L24 2 L23 CSS  
 L25 1088 L23 CSS FULL  
     SAV TEM L25 LE356F0/A  
 L26 STR  
 L27 1 L26 CSS  
 L28 1000 L26 CSS FULL  
     SAV TEM LE356F1/A L28

FILE 'HCAPLUS' ENTERED AT 10:02:51 ON 22 MAR 2005

L29 1326 L25 OR L28  
 L30 0 L29 AND L1-4  
 L31 0 RECEPTOPHARM?/CS, PA  
 L32 QUE PY<2004 OR AY<2004 OR PRY<2004  
 L33 1285 L29 AND L32  
 L34 169 L33 AND US/PC.B  
     SEL HIT RN L34 1-10

FILE 'REGISTRY' ENTERED AT 10:06:05 ON 22 MAR 2005

L35 19 E8-26

=> b reg  
 FILE 'REGISTRY' ENTERED AT 10:07:01 ON 22 MAR 2005  
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STRUCTURE FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1  
 DICTIONARY FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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Experimental and calculated property data are now available. For more  
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 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sqide 122 tot

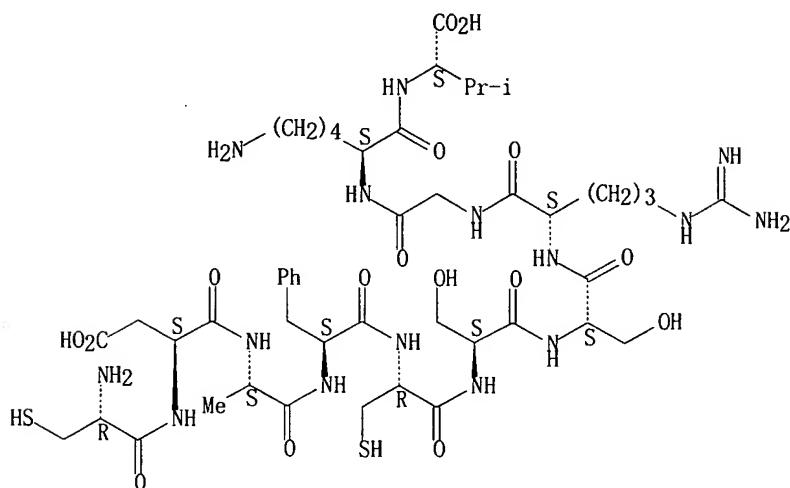
L22 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 199387-04-7 REGISTRY  
 CN L-Valine, L-cysteinyl-L-.alpha.-aspartyl-L-alanyl-L-phenylalanyl-L-  
     cysteinyl-L-seryl-L-seryl-L-arginylglycyl-L-lysyl- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 1: PN: US20040192594 TABLE: 1 unclaimed sequence  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 11

PATENT ANNOTATIONS (PNTE):  
 Sequence | Patent

Source	Reference
Not Given	US2004192594   unclaimed   TABLE 1

SEQ 1 CDAFCSSRGK V  
 MF C47 H77 N15 O16 S2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 DT. CA CAplus document type: Journal; Patent  
 RL. P Roles from patents: PRP (Properties)  
 RL. NP Roles from non-patents: PRP (Properties)

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L22 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 199387-03-6 REGISTRY  
 CN L-Arginine, L-cysteinyll-α-aspartyl-L-alanyl-L-phenylalanyl-L-cysteinyll-seryl-L-isoleucyl-L-arginylglycyl-L-lysyl- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 3: PN: US20040192594 TABLE: 1 unclaimed sequence  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 11

PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	US2004192594   unclaimed   TABLE 1

SEQ 1 CDAFCSIRGK R  
 MF C51 H86 N18 O15 S2

SR CA

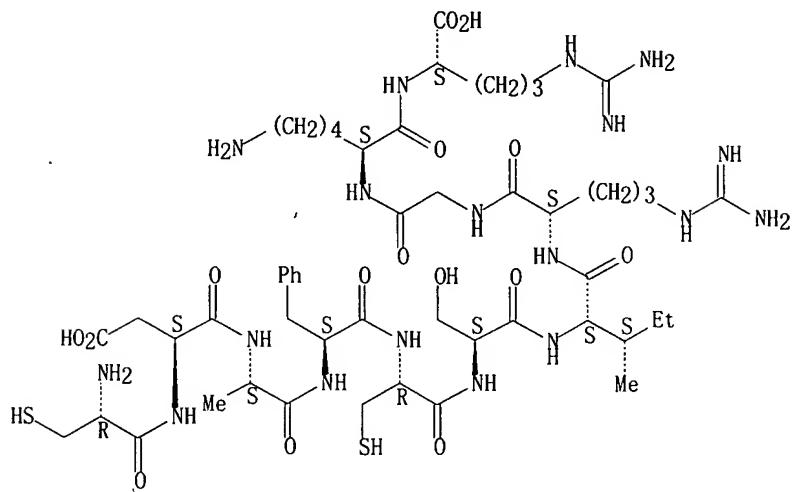
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT. CA Cplus document type: Journal; Patent

RL. P Roles from patents: PRP (Properties)

RL. NP Roles from non-patents: PRP (Properties)

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L22 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN

RN 11032-79-4 REGISTRY

CN .alpha.-Bungarotoxin (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Dithia-5,8,11,14,17-pentaazacycloicosane, cyclic peptide deriv.

CN 5H,10H-Dipyrrolo[2,1-v:2',1'-h1][1,2,5,8,11,14,17,20,23,26,29,32,35]dithia undecaazacyclooctatriacontine, cyclic peptide deriv.

CN 86,18-(Iminoethaniminoethaniminoethaniminomethano[2,1]-endo-pyrrolomethano[2,1]-endo-pyrrolomethano)-56,68-(methanodithiomethano)-1H,90H-pyrrolo[1,2-n3][1,2,69,70,5,8,11,14,17,20,23,26,29,32,35,38,41,44,47,50,53,56,59,62,65,74,77,80,83,86,89,92,95,98,101,104,107,110]tetrathiate tratriacontaazacyclododecahectine, cyclic peptide deriv.

OTHER NAMES:

CN .alpha.-Bgt.

CN .alpha.-Bungotoxin

FS PROTEIN SEQUENCE

SQL 74

NTE

type	-----	location	-----	description
bridge	Cys-3	- Cys-23		disulfide bridge
bridge	Cys-16	- Cys-44		disulfide bridge
bridge	Cys-29	- Cys-33		disulfide bridge
bridge	Cys-48	- Cys-59		disulfide bridge
bridge	Cys-60	- Cys-65		disulfide bridge

SEQ 1 IVCHTTATSP ISAVTCPPGE NLCYRKMWCD AFCSSRGKVV ELGCAATCPS  
 51 KKPYEEVTCC STDKCNPHPK QRPG

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

DR 12687-39-7  
 MF C338 H529 N97 0105 S11  
 CI MAN  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 DT.CA Cplus document type: Conference; Dissertation; Journal; Patent; Report  
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)  
 1112 REFERENCES IN FILE CA (1907 TO DATE)  
 63 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1112 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FILE COVERS 1907 - 22 Mar 2005 VOL 142 ISS 13  
 FILE LAST UPDATED: 21 Mar 2005 (20050321/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all 118 tot

L18 ANSWER 1 OF 1 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:802540 HCPLUS  
 DN 141:325758  
 ED Entered STN: 01 Oct 2004  
 TI Modified neurotoxins as therapeutic agents for the treatment of neurological and viral diseases, and methods for their production  
 IN Reid, Paul; Raymond, Laurence  
 PA USA  
 SO U.S. Pat. Appl. Publ., 13 pp., Cont. of U.S. Provisional Ser. No. 351,462.  
 CODEN: USXXCO

DT Patent  
 LA English  
 IC ICM A61K038-16  
 NCL 514012000  
 CC 1-11 (Pharmacology)  
 Section cross-reference(s): 63

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004192594	A1	20040930	US 2003-352335	20030127
PRAI	US 2002-351462P	P	20020128		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004192594	ICM	A61K038-16
	NCL	514012000
US 2004192594	ECLA	A61K038/17A

AB A method is disclosed for treatment of neurol. and viral diseases and especially for the treatment of heretofore intractable diseases such as rabies, myasthenia gravis, HIV dementia, muscular dystrophy, multiple sclerosis, and amyotrophic lateral sclerosis, through modulation or blockade of the nicotinic acetylcholine receptor. Also disclosed is a treatment composition of matter and methods of making same. Treatment is based on the fact that certain modified .alpha.-neurotoxins have the ability to attach to or otherwise modulate the nicotinic acetylcholine receptor by blocking attachment or involvement with pathogenic organisms, viruses, or proteins with potentially deleterious functions. The modified .alpha.-neurotoxins may be derived from various venoms including certain genera of snakes and Conus snails and are prepared by detoxification of the purified neurotoxins or contained in whole venom. The native neurotoxin or venom may be detoxified by controlled oxygenation. A novel high temperature technique is also described. Alternatively, the specific neurotoxin may be generated through cloning or synthetic techniques with mutations or non-native amino acids substituted to reduce the affinity of the resulting neurotoxin for its receptor. The composition may also be produced from any venom which acts essentially as a neurotoxin as opposed to essentially a hemotoxin. However, the composition must be derived from venoms which contains .alpha.-neurotoxins such as obtained from the genus *Bungarus*.

ST modified neurotoxin neurol viral disease treatment

IT Naja

(*Naja* venom neurotoxin; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Brain, disease

(adrenomyeloneuropathy; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Quaternary ammonium compounds, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (alkylbenzyldimethyl, chlorides; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Nervous system, disease

(amyotrophic lateral sclerosis; modified neurotoxins as therapeutic

agents for treatment of neurol. and viral diseases)

IT Nervous system, disease  
(ataxia; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Spinal column, disease  
(atrophy; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Temperature effects, biological  
(heat; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Nerve  
(improved conduction and modulation; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(injections, i.m.; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(injections, i.v.; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(injections, s.c.; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(injections; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(intradermal; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Disease, animal  
(leukodystrophy; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Antiviral agents  
Drug delivery systems  
Human  
Multiple sclerosis  
Muscular dystrophy  
Myasthenia gravis  
Naja hannah  
Nervous system, disease  
Nervous system agents  
Rabies  
Vaccines  
(modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Nicotinic receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Toxins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(neurotoxins, Naja venom neurotoxin; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Virus  
(neurotropic; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(oral; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Drug delivery systems  
(otic; modified neurotoxins as therapeutic agents for treatment of

neurol. and viral diseases)

IT Venoms  
(snake; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Nerve  
(toxicity, improved conduction and modulation; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT Toxins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(.alpha.-neurotoxin; modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT 51-83-2, Carbamylcholine chloride 54-11-5, Nicotine 57-94-3  
7262-79-5, Suberyldicholine  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); BIOL (Biological study)  
(modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT 11032-79-4, .alpha.-Bungarotoxin 59536-69-5, Erabutoxin  
124511-67-7, .kappa.-Bungarotoxin 144637-68-3, .alpha.-Dendrotoxin  
156467-85-5, .alpha.-Conotoxin Im I 345633-01-4, .alpha.-Cobrotoxin  
769933-79-1, .alpha.-Cobratoxin 769933-79-1D, .alpha.-Cobratoxin,  
oxidized 769935-09-3, .alpha.-Conotoxin G 1 769935-42-4,  
.alpha.-Conotoxin M 1 769935-53-7, .alpha.-Conotoxin S 1 769935-58-2,  
.alpha.-Conotoxin S 1A  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(modified neurotoxins as therapeutic agents for treatment of neurol. and viral diseases)

IT 199387-03-6 199387-04-7 769122-37-4 769122-38-5  
769122-39-6 769122-40-9 769122-41-0  
RL: PRP (Properties)  
(unclaimed sequence; modified neurotoxins as therapeutic agents for the treatment of neurol. and viral diseases, and methods for their production)

=> b reg

FILE 'REGISTRY' ENTERED AT 10:07:33 ON 22 MAR 2005

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STRUCTURE FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1

DICTIONARY FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sqide 121 tot

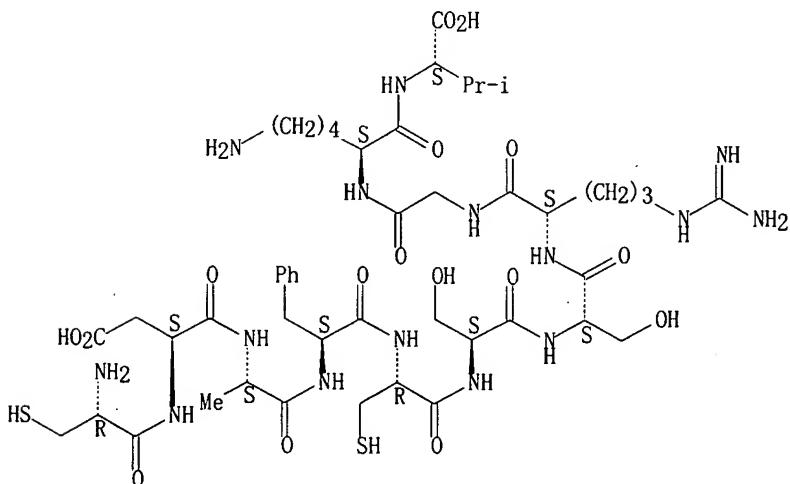
L21 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 199387-04-7 REGISTRY  
 CN L-Valine, L-cysteinyl-L-.alpha.-aspartyl-L-alanyl-L-phenylalanyl-L-cysteinyl-L-seryl-L-seryl-L-arginylglycyl-L-lysyl- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 1: PN: US20040192594 TABLE: 1 unclaimed sequence  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 11

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
=====+=====	
Not Given	US2004192594
	unclaimed
	TABLE 1

SEQ 1 CDAFCSSRGK V  
 MF C47 H77 N15 O16 S2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 DT. CA CAplus document type: Journal; Patent  
 RL. P Roles from patents: PRP (Properties)  
 RL. NP Roles from non-patents: PRP (Properties)

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L21 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 199387-03-6 REGISTRY  
 CN L-Arginine, L-cysteinyl-L-.alpha.-aspartyl-L-alanyl-L-phenylalanyl-L-cysteinyl-L-seryl-L-isoleucyl-L-arginylglycyl-L-lysyl- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 3: PN: US20040192594 TABLE: 1 unclaimed sequence

FS PROTEIN SEQUENCE; STEREOSEARCH  
SQL 11

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
=====+=====	
Not Given	US2004192594
	unclaimed
	TABLE 1

SEQ 1 CDAFCSIRGK R  
MF C51 H86 N18 O15 S2

SR CA

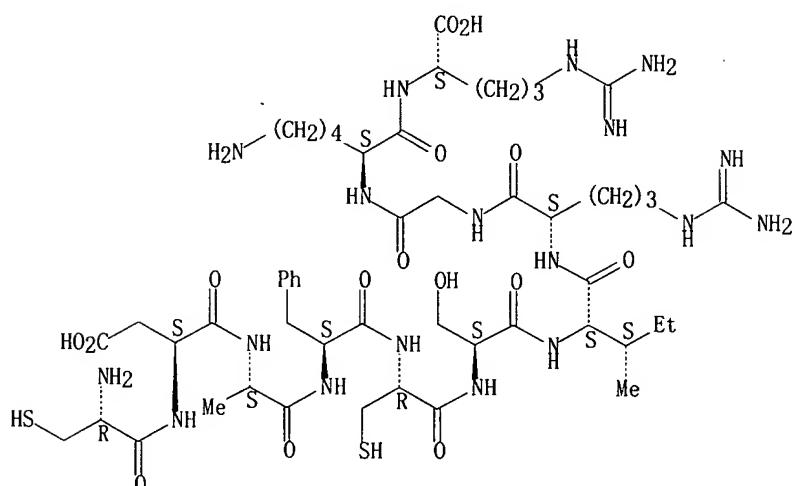
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT CA CAplus document type: Journal; Patent

RL P Roles from patents: PRP (Properties)

RL NP Roles from non-patents: PRP (Properties)

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L21 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN

RN 69344-74-7 REGISTRY

CN .alpha.-Cobratoxin (*Naja naja siamensis*) (9CI) (CA INDEX NAME)

## OTHER CA INDEX NAMES:

CN 1, 2-Dithia-5, 8, 11, 14, 17-pentaazacycloicosane, cyclic peptide deriv.

CN 1H, 34H-Pyrrolo[2, 1-h1][1, 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35]dithiaundecaazacyclooctatriacontine, cyclic peptide deriv.

## OTHER NAMES:

CN .alpha.-Cobratoxin

CN .alpha.-Cobratoxin (*Naja kaouthia*)

FS PROTEIN SEQUENCE

SQL 71

NTE

type	----- location -----		description
bridge	Cys-3	- Cys-20	disulfide bridge
bridge	Cys-14	- Cys-41	disulfide bridge
bridge	Cys-26	- Cys-30	disulfide bridge
bridge	Cys-45	- Cys-56	disulfide bridge
bridge	Cys-57	- Cys-62	disulfide bridge

SEQ 1 IRCFITPDIT SKDCPNGHVC YTAKTWCDAFC SIRGKRVVDLG CAATCPTVKT  
51 GVDIQCCSTD NCNPFPTRKR P

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

MF C332 H520 N98 O101 S10

CI MAN

LC STN Files: ANABSTR, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPAT2, USPATFULL

DT. CA CAplus document type: Conference; Journal; Patent

RL. P Roles from patents: BIOL (Biological study); PREP (Preparation); PROC (Process)

RL. NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD. NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); PRP (Properties); RACT (Reactant or reagent)

82 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

82 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L21 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN

RN 11032-79-4 REGISTRY

CN .alpha.-Bungarotoxin (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Dithia-5,8,11,14,17-pentaazacycloicosane, cyclic peptide deriv.

CN 5H,10H-Dipyrrolo[2,1-v:2',1'-h1][1,2,5,8,11,14,17,20,23,26,29,32,35]dithia undecaazacyclooctatriaconine, cyclic peptide deriv.

CN 86,18-(Iminoethaniminoethaniminoethaniminoethaniminoethanomethano[2,1]-endo-pyrrolomethano[2,1]-endo-pyrrolomethano)-56,68-(methanodithiomethano)-1H,90H-pyrrolo[1,2-n3][1,2,69,70,5,8,11,14,17,20,23,26,29,32,35,38,41,44,47,50,53,56,59,62,65,74,77,80,83,86,89,92,95,98,101,104,107,110]tetrathiate tratriacontaazacyclododecahectine, cyclic peptide deriv.

OTHER NAMES:

CN .alpha.-Bgt.

CN .alpha.-Bungotoxin

FS PROTEIN SEQUENCE

SQL 74

NTE

type	----- location -----		description
bridge	Cys-3	- Cys-23	disulfide bridge
bridge	Cys-16	- Cys-44	disulfide bridge
bridge	Cys-29	- Cys-33	disulfide bridge
bridge	Cys-48	- Cys-59	disulfide bridge
bridge	Cys-60	- Cys-65	disulfide bridge

SEQ 1 IVCHTTATSP ISAVTCPPGE NLCYRKMWCD AFCSSRGKVV ELGCAATCPS  
51 KKPYEEVTCC STDKCNPHPK QRPG

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

DR 12687-39-7  
 MF C338 H529 N97 0105 S11  
 CI MAN  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,  
     CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, NAPRALERT,  
     NIOSHTIC, PROMT, RTECS\*, TOXCENTER, USPAT2, USPATFULL  
     (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*  
     (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 DT. CA CAplus document type: Conference; Dissertation; Journal; Patent; Report  
 RL. P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
     PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
     reagent); USES (Uses)  
 RLD. P Roles for non-specific derivatives from patents: ANST (Analytical  
     study); BIOL (Biological study); PREP (Preparation); PROC (Process);  
     RACT (Reactant or reagent); USES (Uses)  
 RL. NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
     study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP  
     (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
     reagent); USES (Uses); NORL (No role in record)  
 RLD. NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
     study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC  
     (Miscellaneous); PREP (Preparation); PROC (Process); PRP (Properties);  
     USES (Uses)  
     1112 REFERENCES IN FILE CA (1907 TO DATE)  
     63 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
     1112 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FILE COVERS 1907 - 22 Mar 2005 VOL 142 ISS 13  
 FILE LAST UPDATED: 21 Mar 2005 (20050321/ED)

This file contains CAS Registry Numbers for easy and accurate  
 substance identification.

=> d all 120 tot

L20 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:733565 HCAPLUS  
 DN 142:127318  
 ED Entered STN: 09 Sep 2004  
 TI Galantamine and nicotine have a synergistic effect on inhibition of  
     microglial activation induced by HIV-1 gp120

AU Giunta, B.; Ehrhart, J.; Townsend, K.; Sun, N.; Vendrame, M.; Shytle, D.; Tan, J.; Fernandez, F.  
 CS Neuroimmunology Laboratory, College of Medicine, University of South Florida, Tampa, FL, 33613, USA  
 SO Brain Research Bulletin (2004), 64(2), 165-170  
 CODEN: BRBUDU; ISSN: 0361-9230  
 PB Elsevier Inc.  
 DT Journal  
 LA English  
 CC 1-11 (Pharmacology)  
 AB Chronic brain inflammation is the common final pathway in the majority of neurodegenerative diseases and central to this phenomenon is the immunological activation of brain mononuclear phagocyte cells, called microglia. This inflammatory mechanism is a central component of HIV-associated dementia (HAD). In the healthy state, there are endogenous signals from neurons and astrocytes, which limit excessive central nervous system (CNS) inflammation. However, the signals controlling this process have not been fully elucidated. Studies on the peripheral nervous system suggest that a cholinergic anti-inflammatory pathway regulates systemic inflammatory response by way of acetylcholine acting at the  $\alpha_7$  nicotinic acetylcholine receptor ( $\alpha_7$ nAChR) found on blood-borne macrophages. Recent data from our laboratory indicates that cultured microglial cells also express this same receptor and that microglial anti-inflammatory properties are mediated through it and the p44/42 mitogen-activated protein kinase (MAPK) system. Here we report for the first time the creation of an in vitro model of HAD composed of cultured microglial cells synergistically activated by the addition of IFN- $\gamma$  and the HIV-1 coat glycoprotein, gp120. Furthermore, this activation, as measured by TNF- $\alpha$  and nitric oxide (NO) release, is synergistically attenuated through the  $\alpha_7$ nAChR and p44/42 MAPK system by pretreatment with nicotine, and the cholinesterase inhibitor, galantamine. Our findings suggest a novel therapeutic combination to treat or prevent the onset of HAD through this modulation of the microglia inflammatory mechanism.  
 ST nicotine galantamine synergistic drug interaction microglial activation  
 HIV1 dementia  
 IT Drug targets  
 Nicotinic antagonists  
 (co-pretreatment of mouse primary microglial cell with  $\alpha_7$ nAChR inhibitor  $\alpha$ -bungarotoxin reduced nicotine, galantamine inhibition on TNF- $\alpha$  production, NO release induced by HIV-1 gp120/IFN- $\gamma$  and reduced p44/42 MAPK phosphorylation)  
 IT Anti-inflammatory agents  
 Human immunodeficiency virus 1  
 (co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha_7$ nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)  
 IT Tumor necrosis factors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha_7$ nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)  
 IT Mental disorder  
 (dementia; co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced HAD-like microglial activation through inhibiting  $\alpha_7$ nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)  
 IT Drug interactions  
 (synergistic; co-pretreatment with nicotine and galantamine

synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha$ . 7nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)

## IT Nicotinic receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (. $\alpha$ .7; co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha$ . 7nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)

## IT Interferons

RL: BSU (Biological study, unclassified); BIOL (Biological study) (. $\gamma$ ; co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha$ . 7nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)

IT 11032-79-4,  $\alpha$ -Bungarotoxin

RL: BSU (Biological study, unclassified); BIOL (Biological study) (co-pretreatment of mouse primary microglial cell with  $\alpha$ . 7nAChR inhibitor  $\alpha$ -bungarotoxin reduced nicotine, galantamine inhibition on TNF- $\alpha$  production, NO release induced by HIV-1 gp120/IFN- $\gamma$  and reduced p44/42 MAPK phosphorylation)

## IT 9001-08-5, Cholinesterase 10102-43-9, Nitric oxide, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha$ . 7nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)

## IT 54-11-5, Nicotine 357-70-0, Galantamine

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha$ . 7nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)

## IT 142243-02-5

RL: BSU (Biological study, unclassified); BIOL (Biological study) (p44/42; co-pretreatment with nicotine and galantamine synergistically reduced HIV-1 gp120/IFN- $\gamma$ -induced TNF- $\alpha$  production and NO release through inhibiting  $\alpha$ . 7nAChR and phosphorylation of p44/42 MAPK in mouse primary culture microglial cells)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Aloisi, F; J Neuroimmunol 2000, V107, P111 HCPLUS
- (2) Anderson, E; J Acquir Immune Defic Syndr 2002, V31(Suppl 2), PS43
- (3) Bansal, A; Brain Res 2000, V879, P42 HCPLUS
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L20 ANSWER 2 OF 6 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:513538 HCPLUS  
 DN 141:65099  
 ED Entered STN: 25 Jun 2004  
 TI Inhibition of inflammation using .alpha.7 nicotinic receptor-binding cholinergic agonists  
 IN Tracey, Kevin J.; Wang, Hong  
 PA North Shore-Long Island Jewish Research Institute, USA  
 SO PCT Int. Appl., 75 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K031-444  
 ICS A61K031-454; A61P001-00; A61P009-00; A61P011-00; A61P015-00;  
 A61P029-00; A61P031-00; A61P033-00; A61P037-00; A61P043-00  
 CC 1-7 (Pharmacology)

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004052365	A2	20040624	WO 2003-US38708	20031205
	WO 2004052365	A3	20040923		
				W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	
	US 2004204355	A1	20041014	US 2003-729427	20031205
PRAI	US 2002-431650P	P	20021206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004052365	ICM	A61K031-444
	ICS	A61K031-454; A61P001-00; A61P009-00; A61P011-00; A61P015-00; A61P029-00; A61P031-00; A61P033-00; A61P037-00; A61P043-00

US 2004204355 ECLA A61K031/00; A61K031/439; A61K031/444; A61K031/46

OS MARPAT 141:65099

AB Methods of inhibiting release of a proinflammatory cytokine from a macrophage are provided. The methods comprise treating the macrophage with a cholinergic agonist in an amount sufficient to decrease the amount of the proinflammatory cytokine that is released from the macrophage, wherein the cholinergic agonist is selective for an .alpha.7 nicotinic receptor. Methods for inhibiting an inflammatory cytokine cascade in a patient are also provided. The methods comprise treating the patient with a cholinergic agonist in an amount sufficient to inhibit the inflammatory cytokine cascade, wherein the cholinergic agonist is selective for an .alpha.7 nicotinic receptor. Methods for determining whether a compound is a cholinergic agonist reactive with an .alpha.7 nicotinic receptor are also provided. The methods comprise determining whether the compound inhibits release of a proinflammatory cytokine from a mammalian cell. Addnl., methods for determining whether a compound is a cholinergic antagonist reactive with an .alpha.7 nicotinic receptor are provided. These methods comprise determining whether the compound reduces the ability of a cholinergic agonist to inhibit the release of a proinflammatory cytokine from a mammalian cell.

Oligonucleotides or mimetics capable of inhibiting attenuation of lipopolysaccharide-induced TNF release from a mammalian macrophage upon exposure of the macrophage to a cholinergic agonist are also provided. The oligonucleotides or mimetics consist essentially of a sequence greater than 5 nucleotides long that is complementary to an mRNA of an .alpha.7 receptor. Addnl., methods of inhibiting attenuation of TNF release from a mammalian macrophage upon exposure of the macrophage to a cholinergic agonist are provided. These methods comprise treating the macrophage with the above-described oligonucleotide or mimetic. Sepsis in mice was treated with 3-(2, 4-dimethoxybenzylidene)anabaseine.

ST inflammation inhibition alpha7 nicotinic receptor cholinergic agonist; proinflammatory cytokine macrophage inhibition alpha7 nicotinic agonist; inflammatory cytokine cascade inhibition alpha7 nicotinic agonist; sepsis treatment dimethoxybenzylidene anabaseine

IT Kidney, disease  
(Goodpasture's syndrome, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT High-mobility group proteins  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(HMG1, as proinflammatory cytokine inhibited from release from macrophage; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Kidney, disease  
(IgA nephropathy, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Bone, disease  
(Paget's, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Arthritis  
(Reiter's syndrome, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Intestine, disease  
(Whipple's, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Digestive tract, disease  
(achalasia, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Respiratory distress syndrome  
(adult, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Transplant rejection  
(allograft, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Lung, disease  
(alveolitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Ameba  
(amebiasis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Spinal column, disease  
(ankylosing spondylitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Appendix, disease  
Inflammation  
(appendicitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Artery, disease  
Inflammation  
(arteritis, treatment of; inflammation inhibition with .alpha.7

nicotinic receptor-binding cholinergic agonists)

IT Disease, animal

Pain

(arthralgia, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Interleukin 18

Interleukin 1. beta.

Interleukin 6

Tumor necrosis factors

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(as proinflammatory cytokine inhibited from release from macrophage; inflammation inhibition with .alpha. 7 nicotinic receptor-binding cholinergic agonists)

IT Bronchi, disease

Inflammation

(bronchiolitis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Bronchi, disease

Inflammation

(bronchitis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Mycosis

(candidiasis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Ischemia

(cardiac, treatment of; inflammation inhibition with .alpha. 7 nicotinic receptor-binding cholinergic agonists)

IT Immune system

(cell of; inflammation inhibition with .alpha. 7 nicotinic receptor-binding cholinergic agonists)

IT Biliary tract, disease

Inflammation

(cholangitis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Gallbladder, disease

Inflammation

(cholecystitis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Lung, disease

(chronic obstructive, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Inflammation

Intestine, disease

(colitis, treatment of; inflammation inhibition with .alpha. 7 nicotinic receptor-binding cholinergic agonists)

IT Infection

(dengue, treatment of; inflammation inhibition with .alpha. 7 nicotinic receptor-binding cholinergic agonists)

IT Joint, anatomical

(disease, arthralgia, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Urethra

(disease, urethritis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Immunity

(disorder, immune complex, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Bacteremia

(disseminated, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Ulcer  
(duodenal, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Intestine, disease  
(duodenum, ulcer, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Heart, disease  
Inflammation  
(endocarditis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Granuloma  
(eosinophilic, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Epididymis  
(epididymitis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
(epiglottitis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Heart, disease  
(failure, treatment of; inflammation inhibition with .alpha. 7 nicotinic  
receptor-binding cholinergic agonists)

IT Inflammation  
(fascia, treatment of; inflammation inhibition with .alpha. 7 nicotinic  
receptor-binding cholinergic agonists)

IT Infection  
(filariasis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT mRNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(for .alpha. 7 nicotinic receptor, oligonucleotides complementary to;  
inflammation inhibition with .alpha. 7 nicotinic receptor-binding  
cholinergic agonists)

IT Gene, animal  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(for .alpha. 7 nicotinic receptor; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Ulcer  
(gastric, treatment of; inflammation inhibition with .alpha. 7 nicotinic  
receptor-binding cholinergic agonists)

IT Transplant and Transplantation  
(graft-vs.-host reaction, treatment of; inflammation inhibition with  
.alpha. 7 nicotinic receptor-binding cholinergic agonists)

IT Granulomatous disease  
(granulomatosis, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Cyst, pathological  
(hydatid, treatment of; inflammation inhibition with .alpha. 7 nicotinic  
receptor-binding cholinergic agonists)

IT Brain, disease  
(infarction, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Hepatitis B virus  
Hepatitis C virus  
Herpesviridae  
Human herpesvirus  
Human immunodeficiency virus  
Respiratory syncytial virus  
(infection with, treatment of; inflammation inhibition with .alpha. 7  
nicotinic receptor-binding cholinergic agonists)

IT Allergy inhibitors

Anti-AIDS agents  
Anti-inflammatory agents  
Antiarthritis  
Antiasthmatics  
Antimalarials  
Antirheumatic agents  
Drug screening  
Human  
Inflammation  
Mammalia  
(inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Oligonucleotides  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(inhibiting attenuation of lipopolysaccharide-induced TNF release from macrophages exposed to cholinergic agonists; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Macrophage  
(inhibition of proinflammatory cytokines release from; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Reperfusion  
Spinal cord, disease  
(injury, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Heart, disease  
(ischemia, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Animal cell  
(mammalian; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Heart, disease  
Inflammation  
(myocarditis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Nerve, disease  
Pain  
(neuralgia, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Nerve, disease  
(neuritis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Pancreas, disease  
(pancreatitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Ulcer  
(peptic, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Artery, disease  
Inflammation  
(periarteritis nodosa, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Pericardium  
(pericarditis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Peritoneum, disease

(peritonitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Pharynx, disease  
(pharyngitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Pleura, disease  
(pleurisy, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Lung, disease  
(pneumonitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Lung, disease  
(pneumoultramicroscopic silicovolcanoconiosis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Cytokines  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(proinflammatory, inhibition of cascade of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Cytokines  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(proinflammatory, inhibition of release of, from macrophages; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Prostate gland, disease  
(prostatitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
(pulmonary alveolitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
(pulmonary, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Injury  
(reperfusion, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Nose, disease  
(rhinitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Lipopolysaccharides  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(screening for agents inhibiting induction in mammalian cell of proinflammatory cytokine cascade by; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Abortion  
Shock (circulatory collapse)  
(septic, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Respiratory tract, disease  
(sinusitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Injury  
(spinal cord, treatment of; inflammation inhibition with .alpha.7

nicotinic receptor-binding cholinergic agonists)

IT Brain, disease  
(stroke, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Arthritis  
Synovial membrane, disease  
(synovitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Lupus erythematosus  
(systemic, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
Thyroid gland, disease  
(thyroiditis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Antisense oligonucleotides  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(to .alpha.7 nicotinic receptor; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Allergy  
Anaphylaxis  
Arthritis  
Asthma  
Atherosclerosis  
Behcet's syndrome  
Burn  
Cachexia  
Celiac disease  
Cystic fibrosis  
Emphysema  
Encephalitis  
Fever and Hyperthermia  
Gout  
Hay fever  
Hepatitis  
Hodgkin's disease  
Influenza  
Ischemia  
Malaria  
Meningitis  
Myasthenia gravis  
Necrosis  
Osteomyelitis  
Paralysis  
Periodontium, disease  
Rheumatic fever  
Rheumatoid arthritis  
Sarcoidosis  
Sepsis  
Septicemia  
(treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Digestive tract, disease  
(ulcer, peptic, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Stomach, disease  
(ulcer, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
(urethritis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Eye, disease  
 Inflammation  
 (uveitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Inflammation  
 Vagina, disease  
 (vaginitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Nerve  
 (vagus, nicotinic receptor .alpha.7 in inhibition of TNF release in response to stimulation of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Blood vessel, disease  
 Inflammation  
 (vasculitis, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Thrombosis  
 (venous, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Infection  
 (viral, treatment of; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Nicotinic agonists  
 Nicotinic antagonists  
 (.alpha.7; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT Nicotinic receptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (.alpha.7; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT 50-36-2D, Cocaine, quaternary analogs 5937-29-1, Cocaine methiodide  
 154291-01-7D, isomers 156743-65-6 156743-78-1 156743-79-2  
 156743-85-0 178419-47-1 220099-94-5 248270-35-1D, isomers  
 248270-40-8 248270-41-9 373358-00-0 400855-55-2 400855-58-5  
 400855-62-1 708210-26-8D, isomers 708210-27-9  
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (as cholinergic agonist of .alpha.7 nicotinic receptor; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT 54-11-5, Nicotine  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT 708306-01-8  
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (nucleotide sequence, inhibiting attenuation of LPS-induced TNF release from macrophage exposed to cholinergic agonist; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT 709881-00-5 709881-01-6 709881-02-7 709881-03-8 709881-04-9  
 709881-05-0 709881-06-1 709881-07-2 709881-08-3 709881-09-4  
 709881-10-7 709881-11-8 709881-12-9 709881-13-0 709881-14-1  
 709881-15-2 709881-16-3 709881-17-4 709881-18-5 709881-19-6  
 RL: PRP (Properties)  
 (unclaimed sequence; inhibition of inflammation using .alpha.7 nicotinic receptor-binding cholinergic agonists)

IT 11032-79-4, .alpha.-Bungarotoxin 37209-28-2, Bungarotoxin  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (.alpha.7 nicotinic receptor antagonist; inflammation inhibition with .alpha.7 nicotinic receptor-binding cholinergic agonists)

L20 ANSWER 3 OF 6 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2001:868225 HCPLUS  
 DN 136:625  
 ED Entered STN: 30 Nov 2001  
 TI Inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation  
 IN Tracey, Kevin J.  
 PA North Shore-Long Island Jewish Research Institute, USA  
 SO PCT Int. Appl., 62 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K031-44  
 CC 1-7 (Pharmacology)  
 Section cross-reference(s): 15

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001089526	A1	20011129	WO 2001-US15708	20010516
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US	2002016344	A1	20020207	US 2001-855446	20010515
US	6610713	B2	20030826		
CA	2408791	AA	20011129	CA 2001-2408791	20010516
EP	1307196	A1	20030507	EP 2001-935542	20010516
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP	2004510695	T2	20040408	JP 2001-585770	20010516
US	2004038857	A1	20040226	US 2003-446625	20030528
US	6838471	B2	20050104		
PRAI	US 2000-206364P	P	20000523		
	US 2001-855446	A	20010515		
	WO 2001-US15708	W	20010516		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001089526	ICM	A61K031-44
US 2002016344	ECLA	A61K031/44
JP 2004510695	FTERM	4C037/DA05; 4C050/AA02; 4C050/BB09; 4C050/CC16; 4C050/DD10; 4C050/EE01; 4C050/FF04; 4C050/GG03; 4C050/HH01; 4C054/AA05; 4C054/CC02; 4C054/DD01; 4C054/EE33; 4C054/FF01; 4C063/AA01; 4C063/BB01; 4C063/CC12; 4C063/DD03; 4C063/EE01; 4C072/AA01; 4C072/BB02; 4C072/CC02; 4C072/CC16; 4C072/DD05; 4C072/EE13; 4C072/FF05; 4C072/GG01; 4C072/HH02; 4C072/UU01; 4C084/AA19; 4C084/NA14; 4C084/ZB112; 4C084/ZB212; 4C086/AA01; 4C086/AA02; 4C086/BA03; 4C086/BC07; 4C086/BC16; 4C086/BC17; 4C086/CB22; 4C086/CB27; 4C086/GA08; 4C086/GA12; 4C086/MA01; 4C086/MA04; 4C086/NA14; 4C086/ZB11; 4C086/ZB21; 4C206/AA01; 4C206/AA02; 4C206/FA42; 4C206/HA22; 4C206/MA01; 4C206/MA04; 4C206/NA14; 4C206/ZB11; 4C206/ZB21

US 2004038857 ECLA A61K031/44

AB Methods are disclosed for inhibition of the proinflammatory cytokine release in a cell. The method comprises the cell treatment with cholinergic agonist. The method is useful in patients at risk for, or suffering from, a condition mediated by an inflammatory cytokine cascade, for example endotoxic shock. The cholinergic agonist treatment can be effected by stimulation of an efferent vagus nerve fiber, or the entire vagus nerve.

ST cholinergic agonist inflammatory cytokine inhibitor vagus nerve; endotoxic shock antiinflammatory cholinergic agonist vagus nerve

IT Hepatitis
 

- (B; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Hepatitis
 

- (C; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation
 

- (Crohn's disease; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Intestine, disease
 

- (Crohn's; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Gene, animal
 

- RL: BSU (Biological study, unclassified); BIOL (Biological study)
  - (GADPH; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Kidney, disease
 

- (Goodpasture's syndrome; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Nervous system, disease
 

- (Guillain-Barre syndrome; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT High-mobility group proteins
 

- RL: BSU (Biological study, unclassified); BIOL (Biological study)
  - (HMG1; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Kidney, disease
 

- (IgA nephropathy; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Bone, disease
 

- (Paget's; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Gene, animal
 

- RL: BSU (Biological study, unclassified); BIOL (Biological study)
  - (TNF; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Esophagus, disease
 

- (achalasia; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Respiratory distress syndrome
 

- (adult; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Allergy
 

- (allergic dermatitis, wheals; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Dermatitis
 

- (allergic, wheals; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Transplant rejection
 

- (allograft; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Lung, disease  
 (alveolitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Ameba  
 Entamoeba histolytica  
 (amebiasis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
 Spinal column, disease  
 (ankylosing spondylitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Artery, disease  
 Inflammation  
 (arteritis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Disease, animal  
 Pain  
 (arthralgia; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Bronchi, disease  
 Inflammation  
 (bronchiolitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Bronchi, disease  
 Inflammation  
 (bronchitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Mycosis  
 (candidiasis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Ischemia  
 (cardiac; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Biliary tract, disease  
 Inflammation  
 (cholangitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Gallbladder, disease  
 Inflammation  
 (cholecystitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Infection  
 (dengue; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Joint, anatomical  
 (disease, arthralgia; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Muscle, disease  
 (disease, fasciitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Urethra  
 (disease, urethritis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Immunity  
 (disorder, immune complex disease; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Bacteremia  
 (disseminated; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
 Intestine, disease

(diverticulitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Ulcer  
(duodenal; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Intestine, disease  
(duodenum, ulcer; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Nerve  
(efferent, vagus; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Heart, disease  
Inflammation  
(endocarditis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Toxins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(endotoxins; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Intestine, disease  
(enteritis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Granuloma  
(eosinophilic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Epididymis  
(epididymitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Heart, disease  
(failure; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Muscle  
(fiber, disease, fasciitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Infection  
(filariasis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Ulcer  
(gastric; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Transplant and Transplantation  
(host-vs.-graft reaction; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Cyst, pathological  
(hydatid; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Brain, disease  
(infarction; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Respiratory tract, disease  
(infection, caused by respiratory syncytial virus; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Respiratory tract, disease  
(infection, epiglottitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Intestine, disease  
(infection, of appendix, appendicitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Respiratory syncytial virus

(infection; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT AIDS (disease)  
Allergy  
Alzheimer's disease  
Anaphylaxis  
Anti-inflammatory agents  
Arthritis  
Asthma  
Atherosclerosis  
Behcet's syndrome  
Blood pressure  
Blood serum  
Burn  
Cachexia  
Celiac disease  
Cholinergic agonists  
Cystic fibrosis  
Dermatitis  
Dermatomyositis  
Emphysema  
Encephalitis  
Endotoxemia  
Fever and Hyperthermia  
Ganglion  
Gout  
Granulomatous disease  
Hay fever  
Hepatitis  
Herpesviridae  
Hodgkin's disease  
Human herpesvirus  
    Human immunodeficiency virus  
    Human immunodeficiency virus 1  
Hypotension  
Influenza  
Liver  
Macrophage  
Malaria  
Meningitis  
Mononuclear cell (leukocyte)  
Multiple sclerosis  
Myasthenia gravis  
Osteomyelitis  
Paralysis  
Periodontium, disease  
Rheumatic fever  
Rheumatoid arthritis  
Sarcoidosis  
Sepsis  
Septicemia  
Sunburn  
Urticaria  
Wart  
    (inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Corticosteroids, biological studies  
Cytokines  
Interleukin 1  
Interleukin 18  
Interleukin 1.beta.

Interleukin 6  
 Lipopolysaccharides  
 Nicotinic receptors  
 Tumor necrosis factors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Reperfusion  
 Spinal cord, disease  
 (injury; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Diabetes mellitus  
 (insulin-dependent; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Infection  
 (intestinal, of appendix, appendicitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Heart, disease  
 (ischemia; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Occupational diseases  
 (lung, pneumoultramicroscopic silicovolcanoconiosis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Cholinergic receptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (macrophage; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Intestine, disease  
 (malabsorption, Whipple's disease; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Heart, disease  
 Inflammation  
 (myocarditis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Nerve, disease  
 Pain  
 (neuralgia; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Inflammation  
 Nerve, disease  
 (neuritis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Nerve  
 (neuron, postganglionic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Lung, disease  
 (occupational, pneumoultramicroscopic silicovolcanoconiosis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Ischemia  
 Necrosis  
 (organ; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Inflammation  
 Pancreas, disease  
 (pancreatitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)  
 IT Ulcer  
 (peptic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Artery, disease  
Inflammation  
(periarteritis nodosa; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Pericardium  
(pericarditis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Organ, animal  
(peripheral; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Peritoneum, disease  
(peritonitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Pharynx, disease  
(pharyngitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Pleura, disease  
(pleurisy; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Lung, disease  
(pneumonitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Pneumoconiosis  
(pneumoultramicroscopic silicovolcanoconiosis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Cytokines  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(proinflammatory; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Prostate gland, disease  
(prostatitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Intestine, disease  
(pseudomembranous enterocolitis, ulcerative acute and ischemic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
(pulmonary alveolitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
(pulmonary; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Arthritis  
(reactive, Reiter's syndrome; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Injury  
(reperfusion; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Nose, disease  
(rhinitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Abortion  
Shock (circulatory collapse)

(septic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Respiratory tract, disease  
(sinusitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Injury  
(spinal cord; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Electric current  
(stimulation of nerve vagus by; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Brain, disease  
(stroke; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Arthritis  
Synovial membrane, disease  
(synovitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Lupus erythematosus  
(systemic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Vein, disease  
(thrombophlebitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Thyroid gland, disease  
(thyroiditis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Liver  
(toxicity; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Digestive tract, disease  
(ulcer, peptic; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Stomach, disease  
(ulcer; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
(urethritis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Eye, disease  
Inflammation  
(uveitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Inflammation  
Vagina, disease  
(vaginitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Nerve  
(vagotomy; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Nerve  
(vagus, sensory, fibers; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Blood vessel, disease  
Inflammation  
(vasculitis; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT Infection

(viral, herpes; inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT 50-22-6, Corticosterone 11032-79-4, .alpha.-Bungarotoxin  
123938-89-6, .alpha.-Conotoxin  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

IT 51-55-8, Atropine, biological studies 51-83-2, Carbachol 51-84-3,  
Acetylcholine, biological studies 60-31-1, Acetylcholine chloride  
63-75-2, Arecoline 357-70-0, Galantamine 6363-82-2, Muscarine  
14769-73-4, Levamisole 107233-08-9, Cevimeline  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(inhibition of inflammatory cytokine production by cholinergic agonists and vagus nerve stimulation)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Collins; US 6096728 A 2000 HCAPLUS
- (2) Dinh; US 5733255 A 1998
- (3) Iino; US 5709853 A 1998 HCAPLUS
- (4) Kelleher; US 5567724 A 1996 HCAPLUS
- (5) Smith; US 5604231 A 1997 HCAPLUS

L20 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:842363 HCAPLUS

DN 134:27293

ED Entered STN: 01 Dec 2000

TI Method of determining the three-dimensional shape of a macromolecule using chemical crosslinking and specific cleavage and fragment analysis

IN Gibson, Bradford W.; Kuntz, Irwin D.; Tang, Ning; Dollinger, Gavin; Oshiro, Connie M.; Hempel, Judith C.; Taylor, Eric

PA Regents of the University of California, USA

SO PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-00

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 6, 7

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000072004	A2	20001130	WO 2000-US14667	20000526
	WO 2000072004	C2	20020829		
	WO 2000072004	A3	20021128		
				W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
				RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
EP	1277050	A2	20030122	EP 2000-937870	20000526
		R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY		
JP	2003528288	T2	20030924	JP 2000-620343	20000526
PRAI US	1999-135891P	P	19990526		
	WO 2000-US14667	W	20000526		

CLASS

## PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2000072004 ICM G01N033-00

AB The present invention provides a fast and efficient method for determining the three-dimensional conformation of a protein. The steps of the method of the invention include: (1) formation of phys. distance constraints, e.g., forming intramol. chemical crosslinks of known size between residues of a protein; (2) enriching the number of the mols. that have intramol. chemical crosslinks in the reaction pool, e.g., using size separation to remove proteins with intermol. bonds; (3) exposing the enriched reaction pool to a protease that cuts the protein at specific sites to produce peptide fragments; (4) measuring the size of the peptide fragments to determine linkage sites with a certain spatial relationship in the protein; and (5) interpreting the data produced to determine spatial geometry and protein structure based on the deduced spatial relationship of the linkage sites. The information is preferably analyzed with aid from a computer system, which can be used to generate and/or analyze distance constraints between amino acids. HIV-1 integrase and Haemophilus CMP-NeuAc synthetase (CNase) were each crosslinked with BS3 followed by size exclusion chromatog., proteolysis, and LC-MS. One crosslinking reaction generated 5 interdomain crosslinks for the integrase and 6 for the CNase. Using these limited Lys-Lys distance constraints in conjunction with threading methods, a unique arrangement for the three integrase domains was calculated using distance geometry and the structures of the 3 domains. A unique fold family in the database was not identified for the CNase although beta.-barrel proteins scored consistently high.

ST shape macromol detn crosslinking cleavage fragment analysis; computer protein tertiary structure detn; integrase tertiary structure detn; CMP sialic acid synthetase tertiary structure detn; bisulfosuccinimidyl suberate crosslinking protein structure detn

IT Cyclophilins  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(A; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Reversed phase HPLC  
(C4 and C8 and C18 separation columns; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Conformation  
(DNA; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Time-of-flight mass spectrometry  
(MALDI- or ESI-; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Polyacrylamide gel electrophoresis  
(SDS; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Electrospray ionization mass spectrometry  
(TOF; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Crosslinking agents  
(bifunctional; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT HPLC  
(capillary; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Amines, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking agent specific for; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Algorithm  
Apparatus  
Chromatography  
Computer program  
Computers  
Conformation  
Crosslinking  
Crosslinking agents  
Databases  
Edman degradation  
Mass spectrometers  
Mass spectrometry  
Mathematical methods  
Molecular structure  
Protein folding  
Protein motifs  
Protein sequence analysis  
Reversed phase liquid chromatography  
Simulation and Modeling, physicochemical  
Size-exclusion chromatography  
(determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Macromolecular compounds  
RL: PRP (Properties)  
(determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT DNA  
Nucleic acids  
Proteins, general, reactions  
RNA  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Mass spectrometers  
(electrospray-ionization; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Peptides, biological studies  
RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); PRP (Properties); BIOL (Biological study); FORM (Formation, nonpreparative)  
(formation and anal. of; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Protein sequences  
(homol.; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Human immunodeficiency virus 1  
(integrase of; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Time-of-flight mass spectrometry  
(laser-induced photodesorption; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Laser ionization mass spectrometry  
(photodesorption, matrix-assisted; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Mass spectrometers  
(photoionization, laser-induced; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Laser desorption mass spectrometry

(photoionization, matrix-assisted; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Conformation  
Tertiary structure  
(protein; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Laser desorption mass spectrometry  
(time-of-flight; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT Parvalbumins  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(.alpha.-; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT 9067-82-7  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(Haemophilus; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT 9001-92-7, Protease 9002-07-7, Trypsin  
RL: CAT (Catalyst use); USES (Uses)  
(determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT 9087-70-1, BPTI 11032-79-4, .alpha.-Bungarotoxin 106096-93-9,  
FGF 2  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT 82436-77-9, Bis(sulfosuccinimidyl)suberate 118674-04-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT 52350-85-3, Integrase  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(of HIV-1; determining three-dimensional shape of macromols. using chemical crosslinking and specific cleavage and fragment anal.)

IT 99400-52-9 310428-35-4 310428-38-7 310428-40-1 310428-42-3  
310428-45-6 310470-94-1 310470-95-2  
RL: PRP (Properties)  
(unclaimed sequence; method of determining the three-dimensional shape of a macromol. using chemical crosslinking and specific cleavage and fragment anal.)

L20 ANSWER 5 OF 6 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 1997:700344 HCPLUS  
DN 128:21731  
ED Entered STN: 07 Nov 1997  
TI Molecular mimicry between the rabies virus glycoprotein and human immunodeficiency virus-1 GP120: cross-reacting antibodies induced by rabies vaccination  
AU Bracci, Luisa; Ballas, Samir K.; Spreafico, Adriano; Neri, Paolo  
CS Department Molecular Biology, University Siena, Siena, Italy  
SO Blood (1997), 90(9), 3623-3628  
CODEN: BLOOAW; ISSN: 0006-4971  
PB Saunders  
DT Journal  
LA English  
CC 15-8 (Immunochemistry)  
AB The 160-170 sequence of human immunodeficiency virus (HIV)-1 gp120 mimics a nicotinic receptor-binding motif of rabies virus glycoprotein and snake neurotoxins. This sequence has been proposed to be involved in the binding of HIV-1 gp120 to the acetylcholine binding sites of nicotinic

receptors. By using biomol. interaction anal. (BIA) technol. the authors have found that HIV-1 gp120 can bind to detergent-extracted nicotinic receptor from fetal calf muscle. The binding is inhibited by nicotine and by a synthetic peptide reproducing the gp120 160-170 sequence. The mol. mimicry between gp120 and rabies virus glycoprotein is confirmed by cross-reacting antibodies. The authors have found that vaccination against rabies can induce the production of anti-HIV-1 gp120 antibodies in humans. The cross-reacting antibodies are directed to the gp120 sequence involved in the mimicry with the rabies virus glycoprotein. The cross-reactivity between the rabies virus and HIV-1 has important implications in transfusion medicine. Moreover, the presence of cross-reacting antibodies between the nicotinic receptor binding site of rabies virus glycoprotein and a fragment of HIV-1 gp120 strengthens the hypothesis about the possible role of nicotinic receptors as potential receptors for HIV-1 in the central nervous system.

ST HIV gp120 protein rabies virus glycoprotein

IT Nervous system  
(central; mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to nicotinic receptor role as HIV receptor in central nervous system)

IT Antibodies  
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
(crossreacting; mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to cross-reacting antibody induction by rabies vaccination)

IT Envelope proteins  
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
(gp120env; mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to cross-reacting antibody induction by rabies vaccination)

IT Human immunodeficiency virus 1  
Rabies virus  
(mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to cross-reacting antibody induction by rabies vaccination)

IT Glycoproteins, general, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to cross-reacting antibody induction by rabies vaccination)

IT Blood transfusion  
(mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to cross-reacting antibody induction by rabies vaccination in relation to)

IT Nicotinic receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to nicotinic receptor role as HIV receptor in central nervous system)

IT Protein motifs  
(nicotine receptor-binding; mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120 in relation to cross-reacting antibody induction by rabies vaccination)

IT 199387-03-6  
RL: PRP (Properties)  
(mol. mimicry between human HIV-1 gp120 and snake neurotoxins)

IT 199387-01-4 199387-02-5  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120  
in relation to cross-reacting antibody induction by rabies vaccination)

IT 199387-04-7

RL: PRP (Properties)

(mol. mimicry between rabies virus glycoprotein and human HIV-1 gp120  
in relation to nicotinic receptor role as HIV receptor in central  
nervous system)

L20 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1990:114028 HCAPLUS

DN 112:114028

ED Entered STN: 31 Mar 1990

TI Receptor fragments and derivatives and their use as molecular decoyants  
for toxins

IN Gershoni, Jonathan M.

PA Israel

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K037-02

ICS C07K013-00; C07K007-10

CC 4-5 (Toxicology)

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8901779	A1	19890309	WO 1988-US2991	19880830
	W: AU, DK, FI, JP, NO, US RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	IL 83687	A1	19950330	IL 1987-83687	19870830
	AU 8823839	A1	19890331	AU 1988-23839	19880830
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	IL 1987-687	A	19870830		
	WO 1988-US2991	A	19880830		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 8901779	ICM	A61K037-02
	ICS	C07K013-00; C07K007-10
US 5770572	ECLA	A61K047/48T2C12P; C07K007/08A; C07K014/705; C07K014/705B14

AB Mimics of endogenous receptors are used to protect humans or other animals  
from the effects of exogenous substances (e.g. curarimimetic neurotoxin,  
snake venom toxin, rabies virus, human immunodeficiency virus) which act  
only after binding to the endogenous receptor. The mimic may be a  
fraction of the endogenous receptor which retains the essential elements  
of the binding site, or a synthetic or biosynthetic derivative thereof  
produced e.g. by genetic engineering techniques. Thus, synthetic  
oligonucleotides coding for amino acids 184-200 of the .alpha.-subunit of  
the acetylcholine receptor of *Torpedo californica* were prepared using

bacterially preferred codons. The oligonucleotides were ligated into expression vector pATH2 and used to transform *Escherichia coli*. The transformed bacteria produced an efficient toxin-binding 36,000-dalton fusion protein designated R4137. R4137 competed successfully with acetylcholine receptors bound to a Con A column for a limiting pool of <sup>125</sup>I-labeled bungarotoxin. R4137 injected i.p. protected mice from an LD<sub>80</sub> of d-tubocurarine or  $\alpha$ -cobrotoxin injected s.c. 5 min later.

ST receptor mimic toxin antidote; acetylcholine receptor peptide bungarotoxin antidote

IT Toxins

RL: BIOL (Biological study)  
(antidotes for, receptor mimics as)

IT Peptides, biological studies

RL: BIOL (Biological study)  
(as receptor mimics)

IT *Torpedo californica*  
(cholinergic receptor peptides of, proteins containing, as neurotoxin antidotes)

IT Receptors

RL: BIOL (Biological study)  
(mimics of, as toxin antidotes)

IT Antivenoms

Virucides and Virustats  
(receptor mimics as)

IT Snake  
(toxins of venom of, antidotes for, receptor mimics as)

IT Receptors

RL: BIOL (Biological study)  
(cholinergic, mimics of, as toxin antidotes)

IT Virus, animal  
(human immunodeficiency, inhibitors of, receptor mimics as)

IT Toxins

RL: BIOL (Biological study)  
(neuro-, antidotes for, receptor mimics as)

IT Receptors

RL: BIOL (Biological study)  
(nicotinic, mimics of, as toxin antidotes)

IT Virus, animal  
(rabies, inhibitors of, receptor mimics as)

IT 57-94-3 156-74-1, Decamethonium 11032-79-4,  
 $\alpha$ -Bungarotoxin 12584-83-7, Cobrotoxin 69344-74-7,  
 $\alpha$ -Cobrotoxin (*Naja naja siamensis*)

RL: BIOL (Biological study)  
(antidotes for, cholinergic receptor mimics as)

IT 116123-44-5

RL: BIOL (Biological study)  
(of cholinergic receptor, of *Torpedo californica*, proteins containing, as neurotoxin antidotes)

=> b reg

FILE 'REGISTRY' ENTERED AT 10:08:09 ON 22 MAR 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1  
 DICTIONARY FILE UPDATES: 20 MAR 2005 HIGHEST RN 845957-95-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

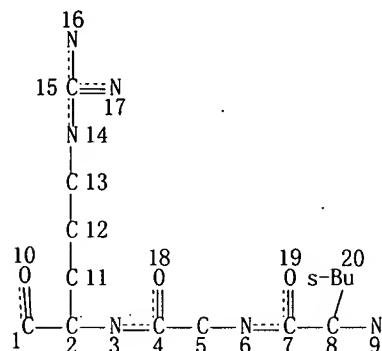
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que sta 125  
 L23 STR



NODE ATTRIBUTES:

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 CONNECT IS M1 RC AT 9  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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STEREO ATTRIBUTES: NONE

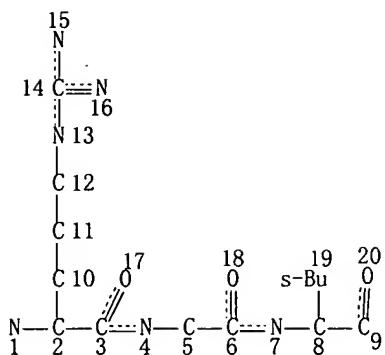
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1088 ANSWERS

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DEFAULT MLEVEL IS ATOM

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED

### STAPLES ATTRIBUTED NAME

STEREO ATTRIBUTES: NONE  
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100.0% PROCESSED 366298 ITERATIONS

1000 ANSWERS

⇒ Lezione 125

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BN 845831 20 6 REGISTRY

RN 845831-29-0 REGISTRY  
CN L-Arginine, L-arginyl-L-cysteinyl-L-isoleucylglycyl- (9CI) (CA INDEX NAME)

NAME) ES PROTEIN SEQUENCE STEREOSEARCH

FS PI  
801 5

SEO 1 PCI CR

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MF C23  
SP CA

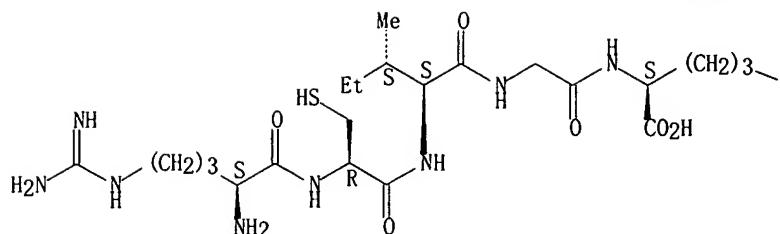
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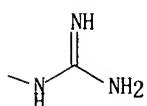
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RI:R Roles from patents: RIOL (Biological study); RPP (Preparations)

### Absolute stereochemistry

PAGE 1-A



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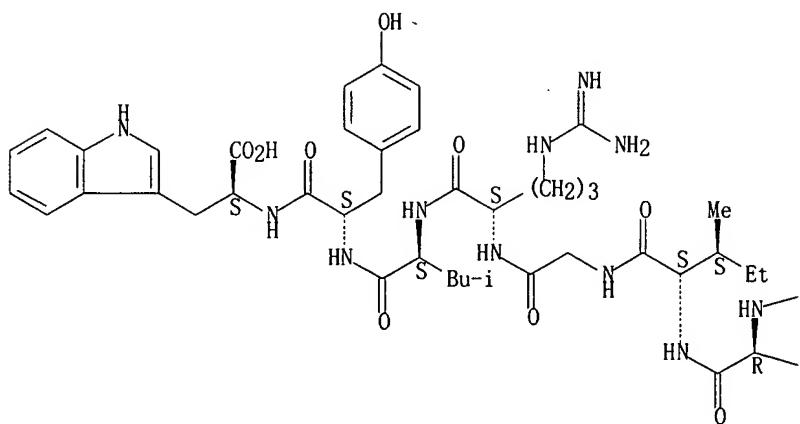
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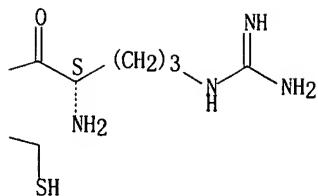
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 RN 845831-19-8 REGISTRY  
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 DT.CA Cplus document type: Patent  
 RL.P Roles from patents: BIOL (Biological study); PRP (Properties)

Absolute stereochemistry.

PAGE 1-A



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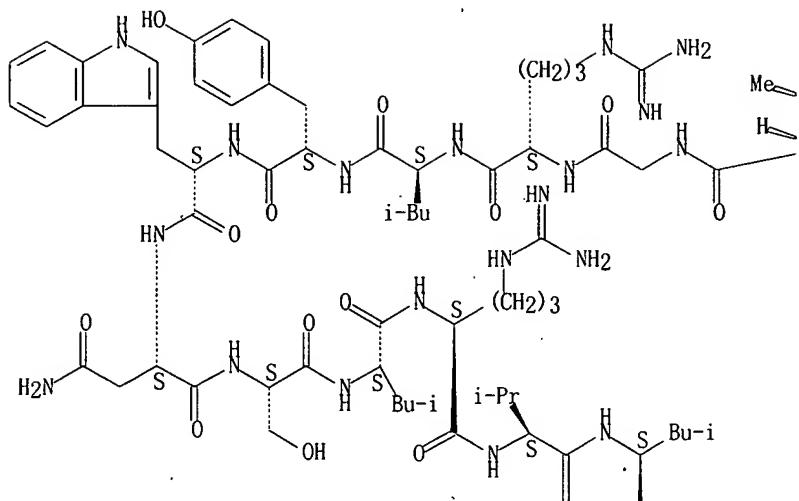
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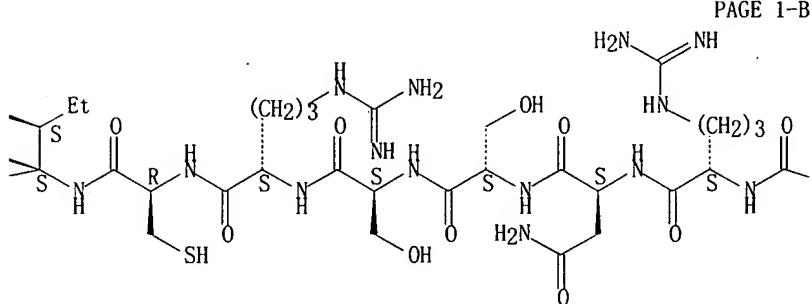
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Absolute stereochemistry.

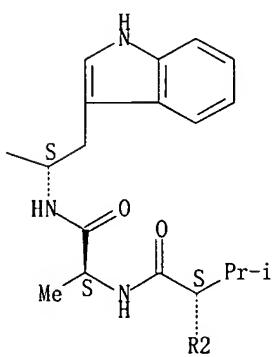
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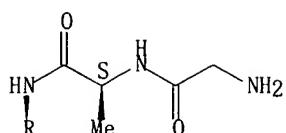
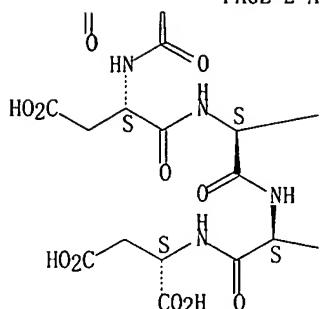
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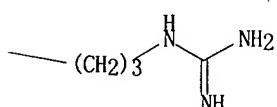
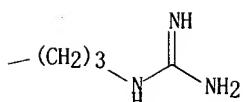
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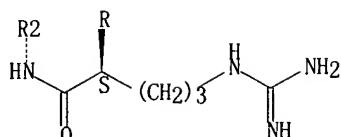
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PAGE 2-B



PAGE 3-A



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RN 831182-95-7 REGISTRY

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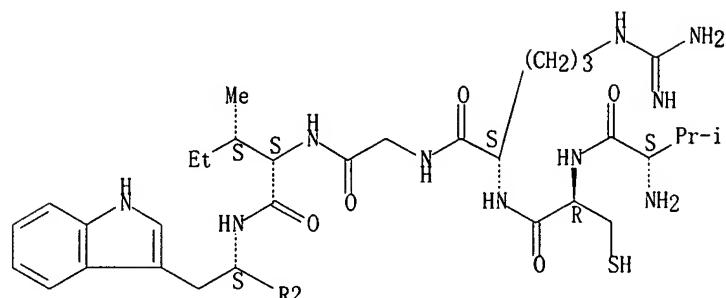
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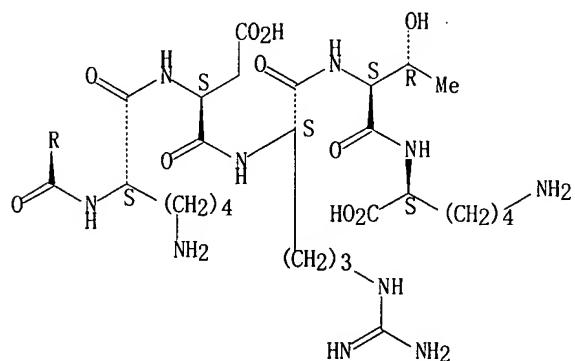
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DT. CA CAplus document type: Patent  
RL. P Roles from patents: PRP (Properties)

Absolute stereochemistry.

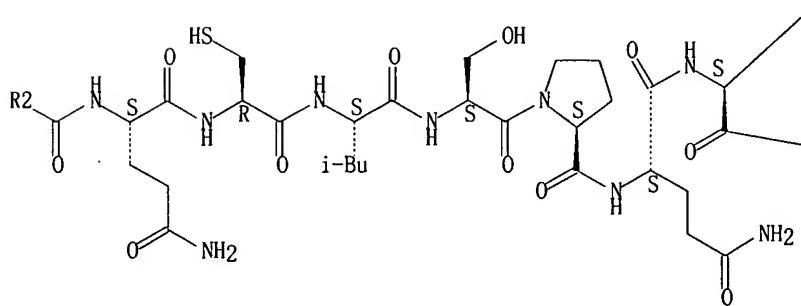
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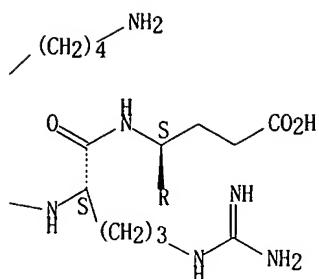
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PAGE 3-A



PAGE 3-B



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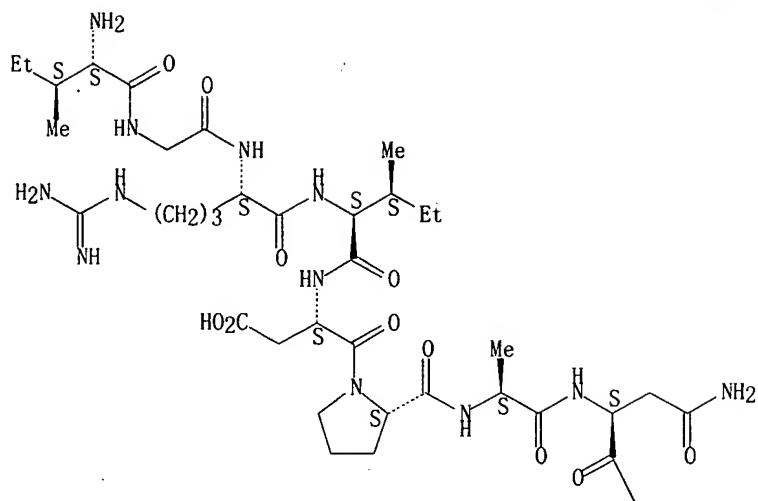
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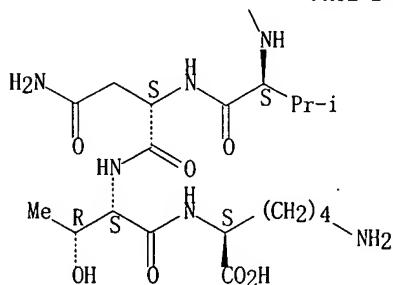
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 DT.CA Cplus document type: Patent  
 RL.P Roles from patents: BIOL (Biological study); PRP (Properties); USES  
 (Uses)

Absolute stereochemistry.

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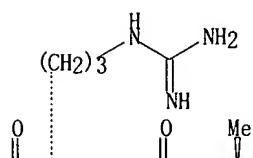
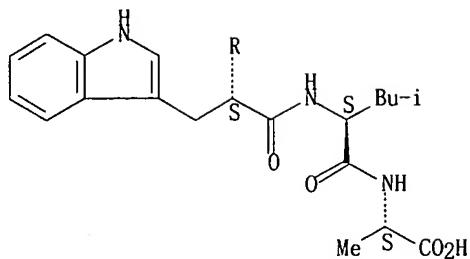
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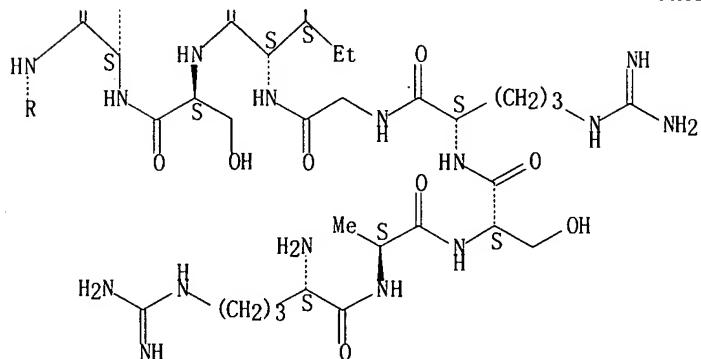
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 RL. P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.

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L35 ANSWER 7 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 827300-97-0 REGISTRY

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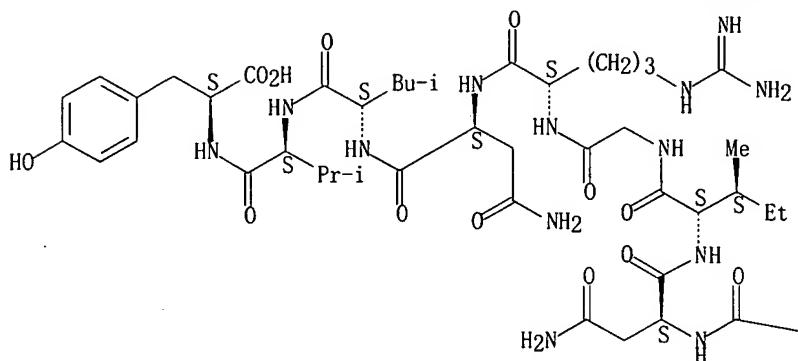
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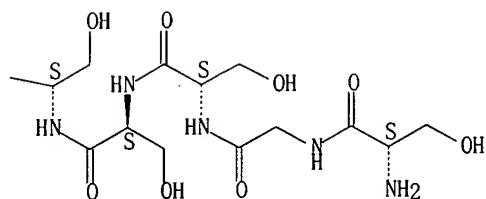
RL P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 8 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 827300-62-9 REGISTRY

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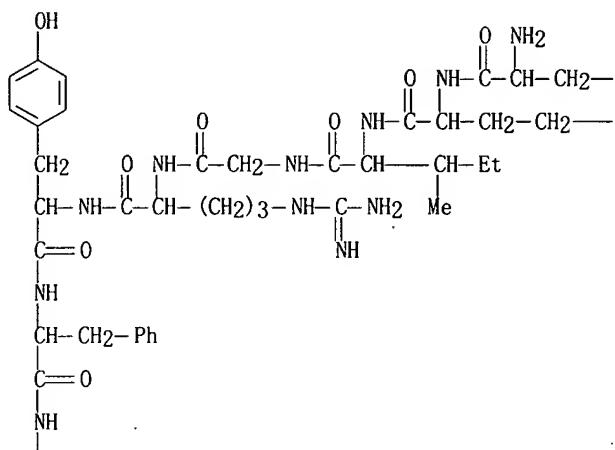
CN 215: PN: US20050009136 SEQID: 141 claimed sequence

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 (Uses)

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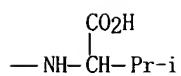


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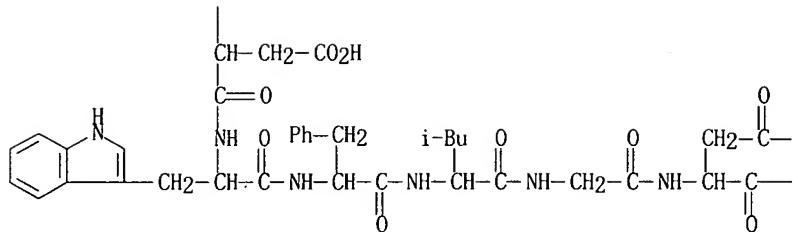
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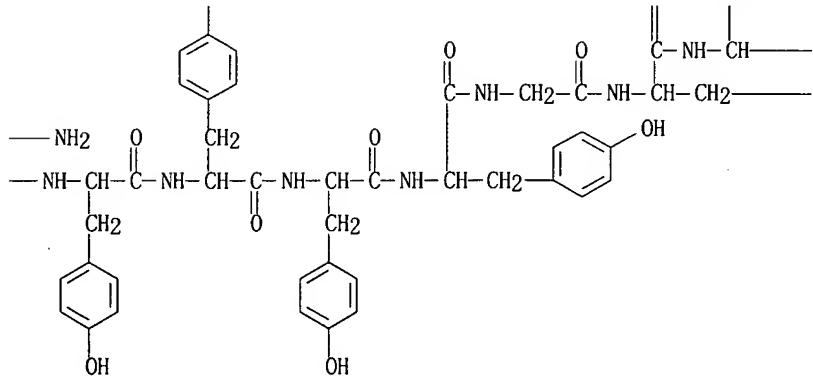
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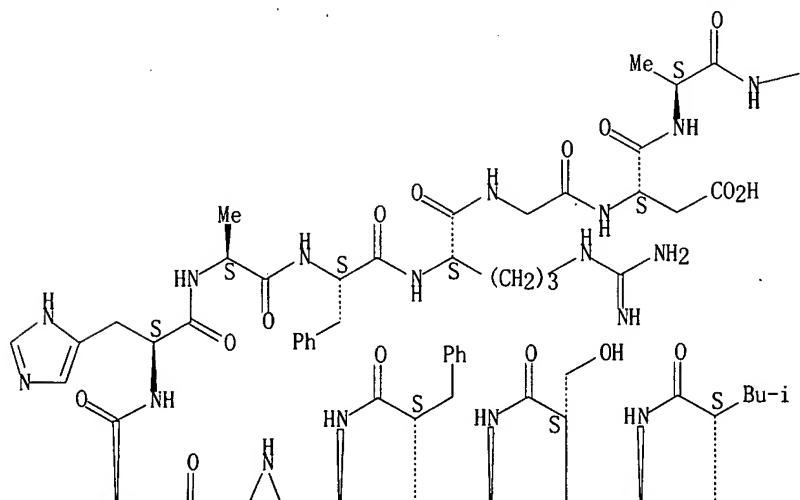
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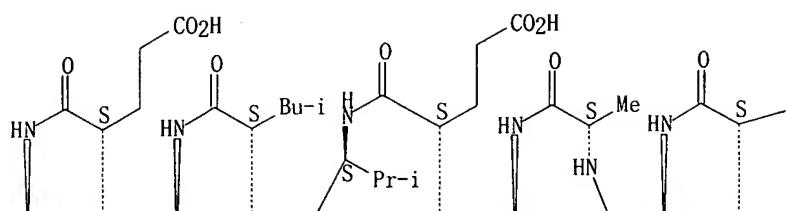
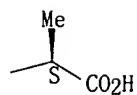
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Absolute stereochemistry.

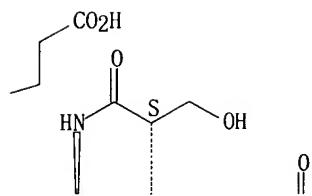
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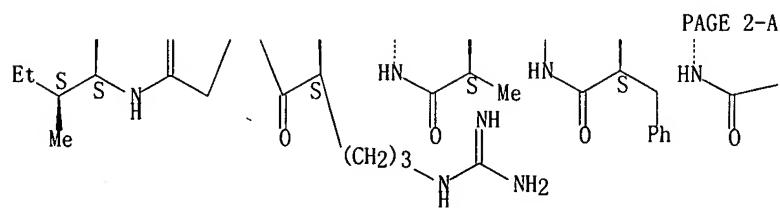
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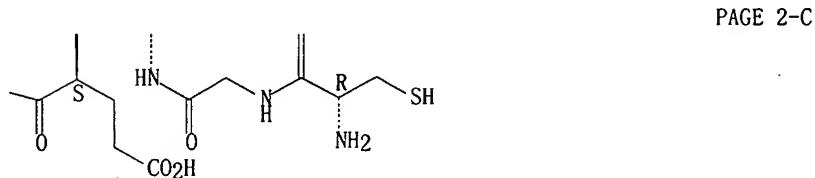
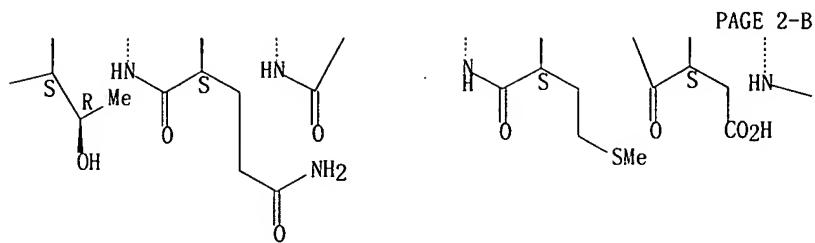


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PAGE 2-A





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L35 ANSWER 10 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 812648-21-8 REGISTRY

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OTHER NAMES:

CN 3879: PN: US20040214272 SEQID: 358901 claimed protein

CN Protein (Zea mays clone MRT4577\_90485C.1. pep fragment)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 34

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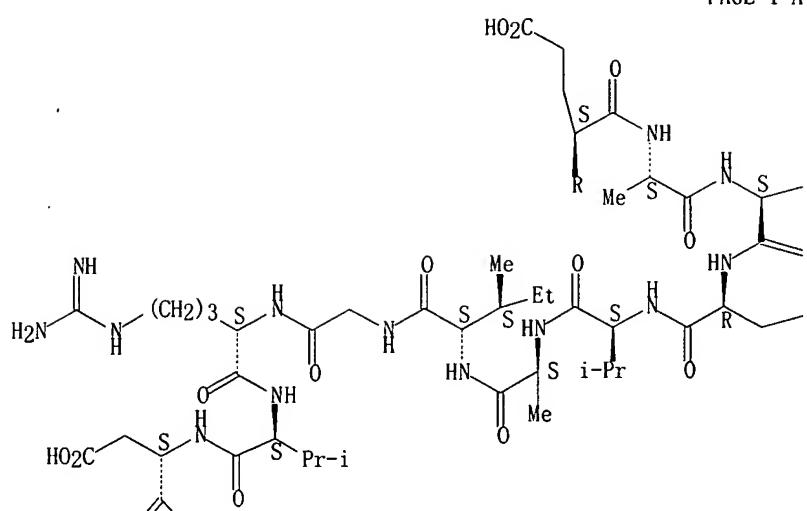
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DT CA Cplus document type: Patent

RL P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.

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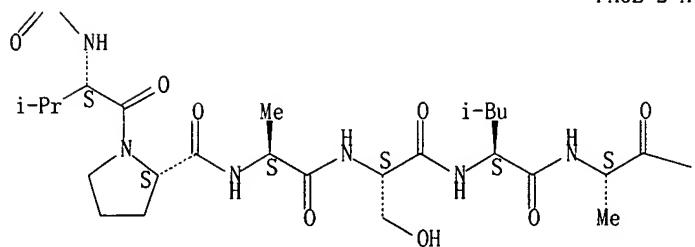
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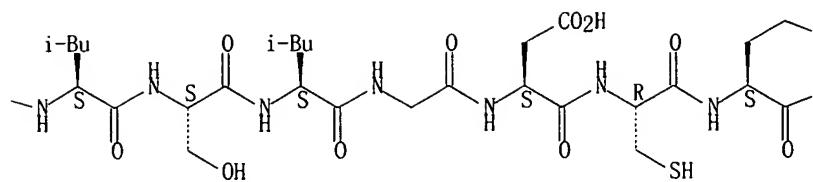
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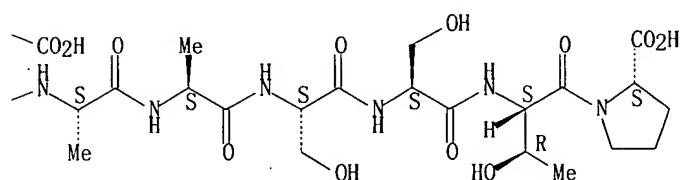
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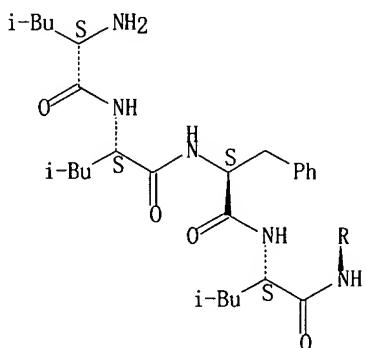
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 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 11 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 811795-85-4 REGISTRY

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 alanyl-L-isoleucyl-L-prolyl-L-. alpha. -glutamyl-L-cysteinyl-L-tryptophyl-L-  
 valyl-L-threonyl-L-valyl-L-isoleucyl-L-histidyl-L-valyl-L-alanyl-L-seryl-L-  
 asparaginyl-L-leucyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4555: PN: US20040214272 SEQID: 344582 claimed protein

CN Protein (Zea mays clone MRT4577\_77423C.1.pep fragment)

FS PROTEIN SEQUENCE; STEREOSEARCH  
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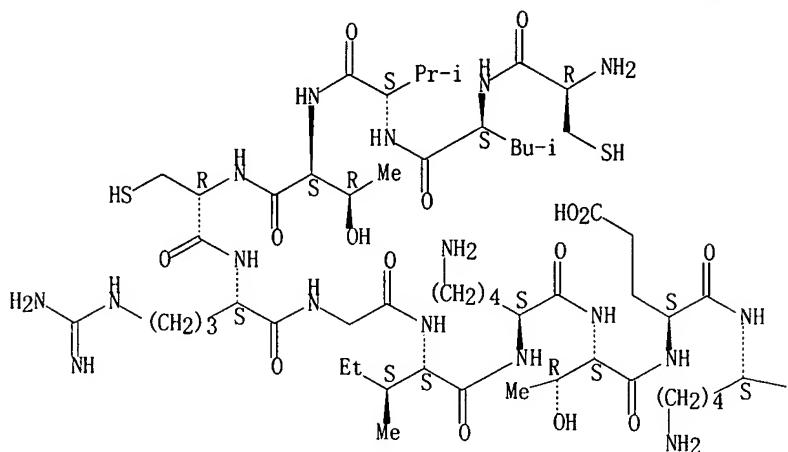
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DT CA CAPLUS document type: Patent

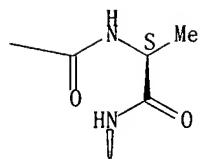
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Absolute stereochemistry.

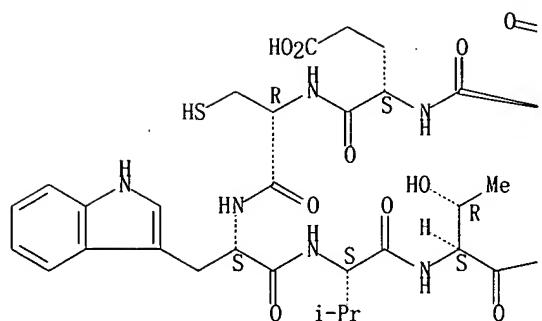
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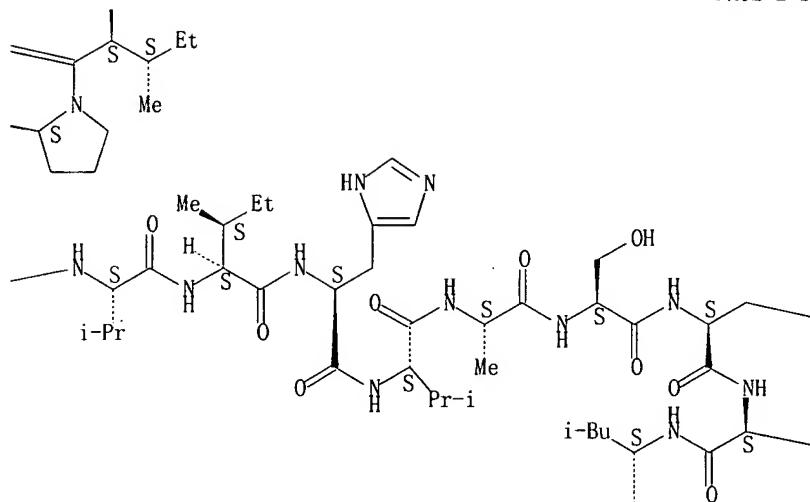
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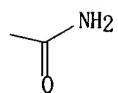
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PAGE 3-B

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 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 12 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 811795-70-7 REGISTRY

CN L-Leucine, L-threonyl-L-isoleucylglycyl-L-arginyl-L-seryl-L-tyrosyl-L-alanyl-L-tryptophyl-L-leucyl-L-glutaminyl-L-seryl-L-. alpha. -aspartyl-L-cysteinyl-L-seryl-L-asparaginyl-L-arginyl-L-leucyl-L-leucyl-L-leucyl-L-asparaginyl-L-seryl-L-alanyl-L-arginyl-L-phenylalanyl-L-seryl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2011: PN: US20040214272 SEQID: 342024 claimed protein

CN Protein (Zea mays clone MRT4577\_75092C.1.pep fragment)

FS PROTEIN SEQUENCE; STEREOSEARCH

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MF C130 H207 N39 O39 S

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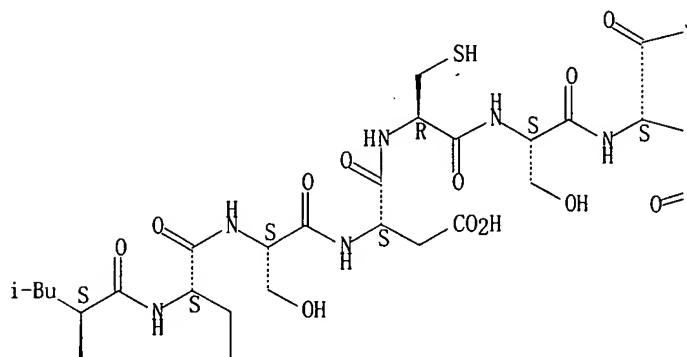
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DT CA CAPLUS document type: Patent

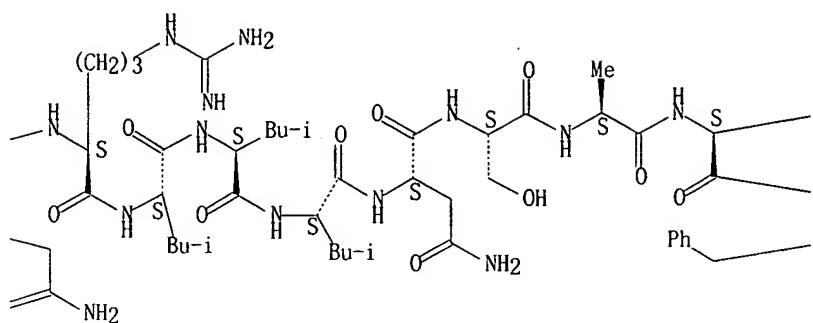
RL P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.

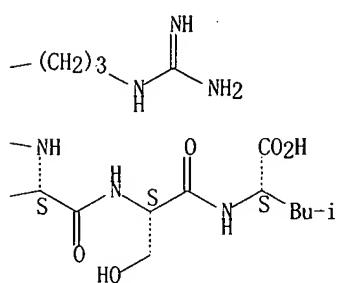
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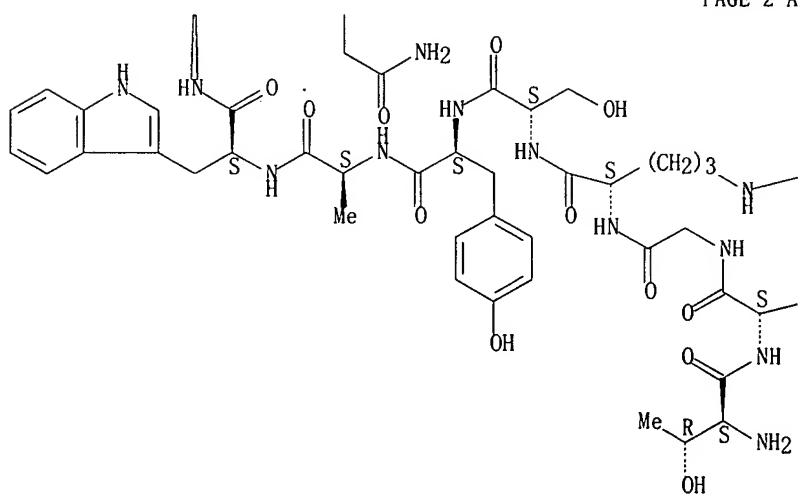
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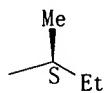
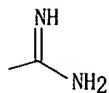
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 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 13 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 809276-37-7 REGISTRY

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OTHER NAMES:

CN 1942: PN: US20040214272 SEQID: 311944 claimed protein

CN Protein (Zea mays clone MRT4577\_47546C. 1. pep fragment)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 31

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Source | Reference

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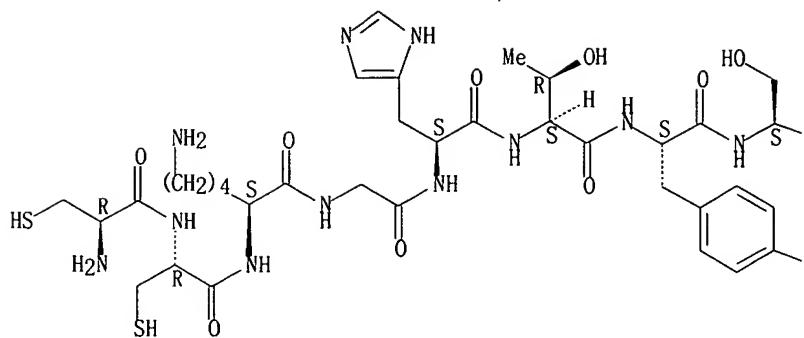
LC STN Files: CA, CAPLUS

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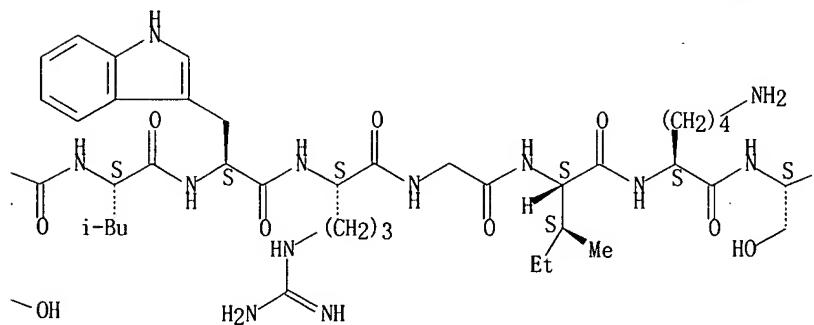
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Absolute stereochemistry.

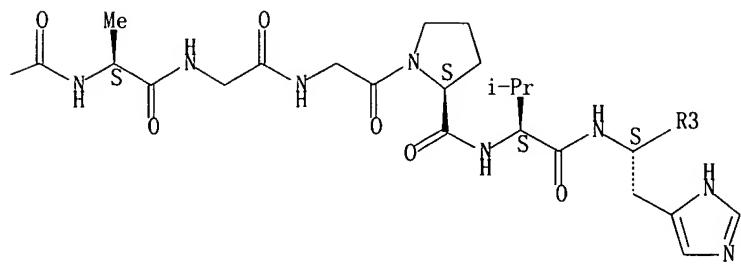
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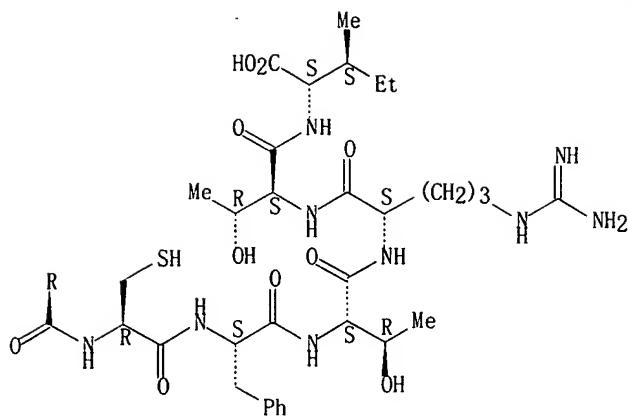
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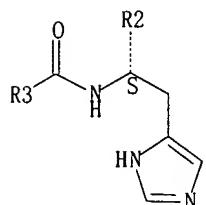
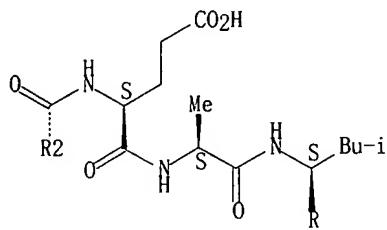
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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 14 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 771485-31-5 REGISTRY

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OTHER NAMES:

CN 18: PN: WO2004087736 SEQID: 18 unclaimed sequence

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FS PROTEIN SEQUENCE; STEREOSEARCH

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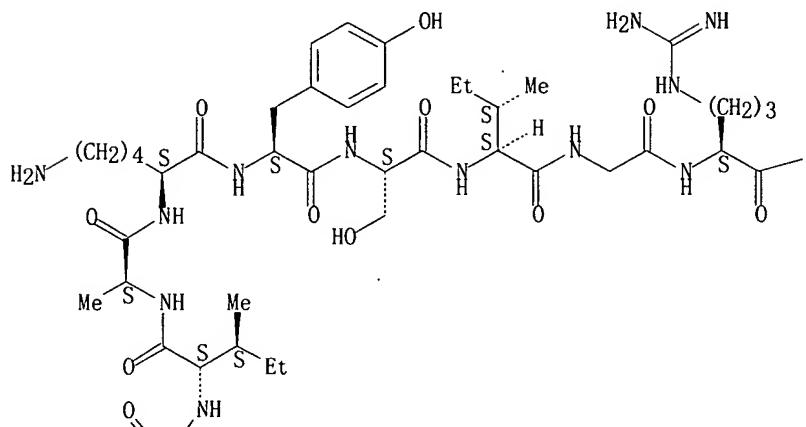
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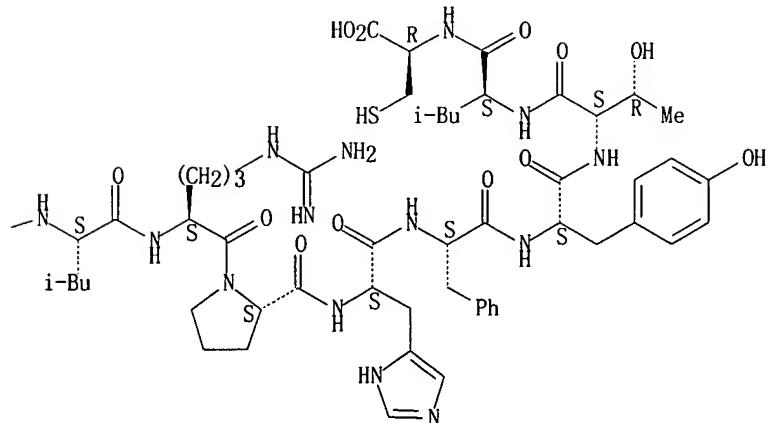
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Absolute stereochemistry.

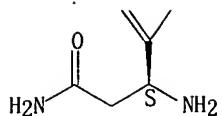
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 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 15 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN

RN 771485-25-7 REGISTRY

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FS PROTEIN SEQUENCE; STEREOSEARCH

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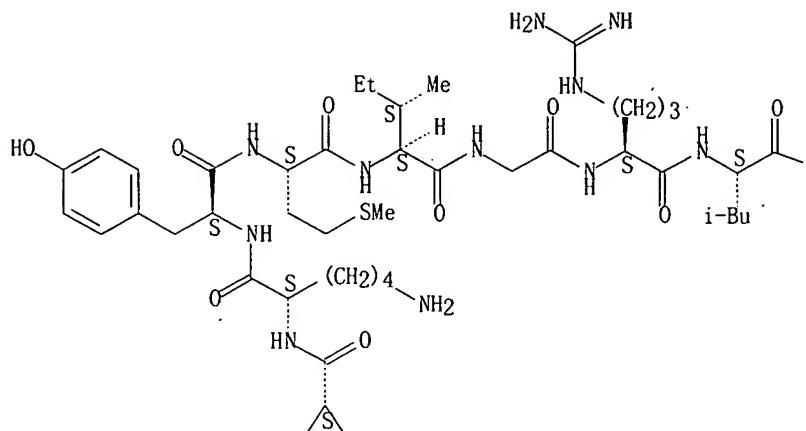
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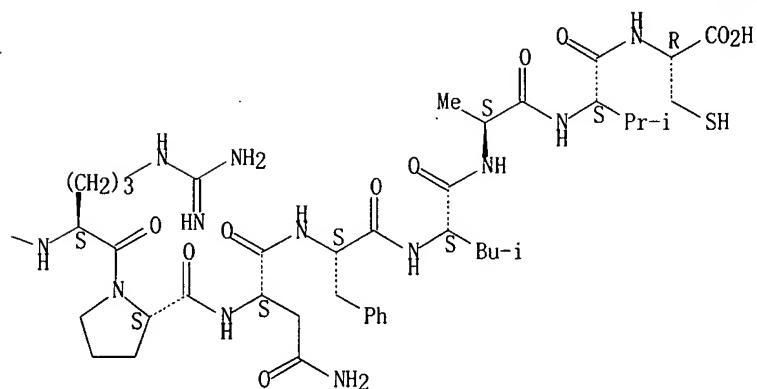
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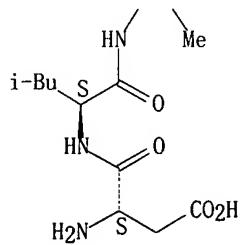
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L35 ANSWER 16 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 771485-14-4 REGISTRY  
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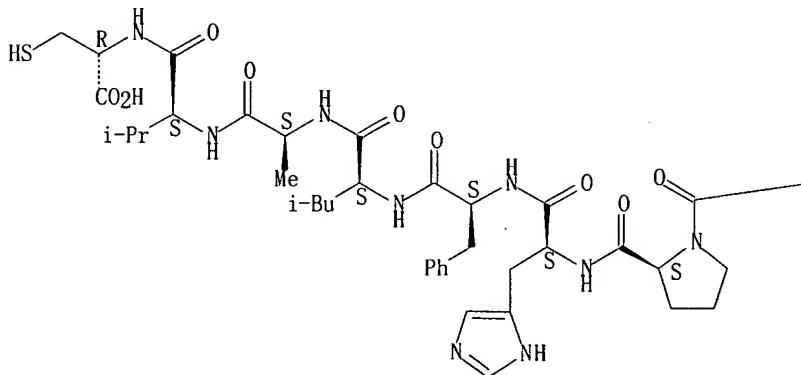
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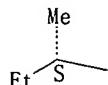
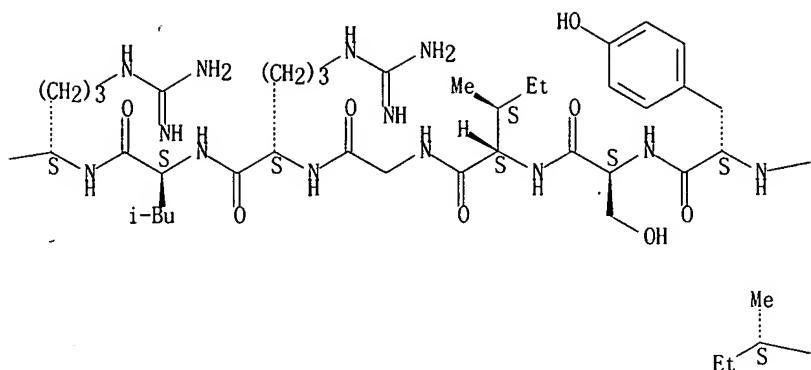
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Absolute stereochemistry.

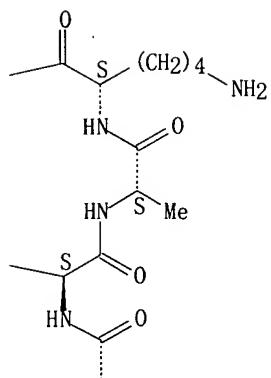
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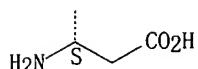
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 RN 771485-09-7 REGISTRY  
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**OTHER NAMES:**

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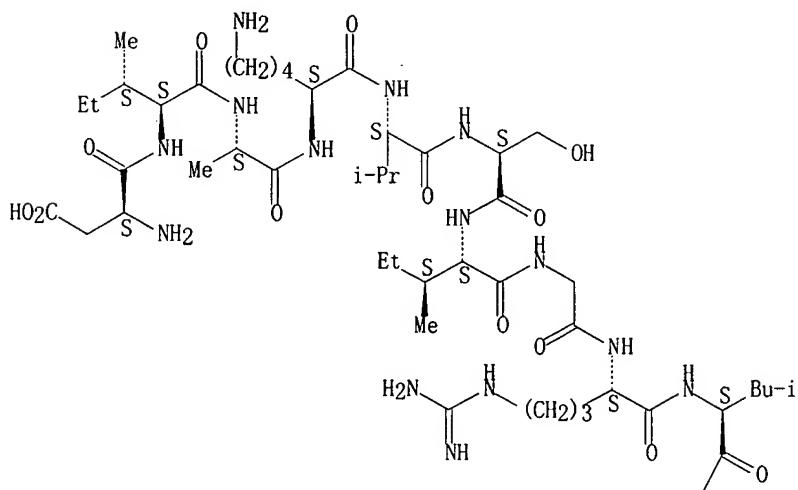
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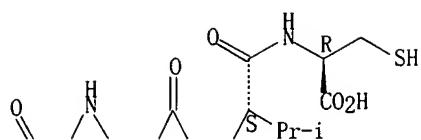
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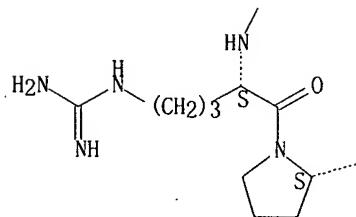
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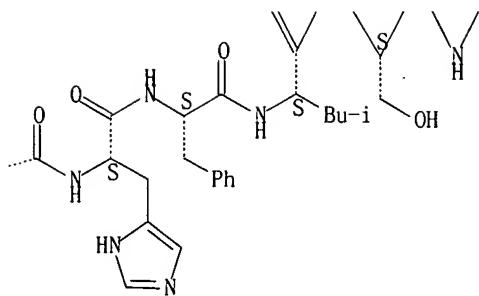
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2 REFERENCES IN FILE CA (1907 TO DATE)  
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INDEX NAME)

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CN 33: PN: WO0231512 TABLE: 4 unclaimed sequence  
 CN 40: PN: WO0069896 TABLE: 4 unclaimed sequence  
 CN 41: PN: WO0242422 PAGE: 64 unclaimed sequence  
 CN 66: PN: US20050019841 PAGE: 82 unclaimed sequence  
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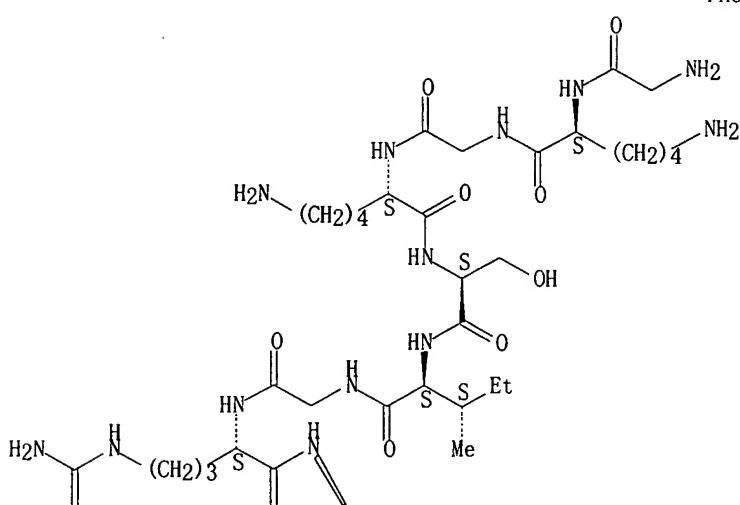
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DT CA Cplus document type: Patent

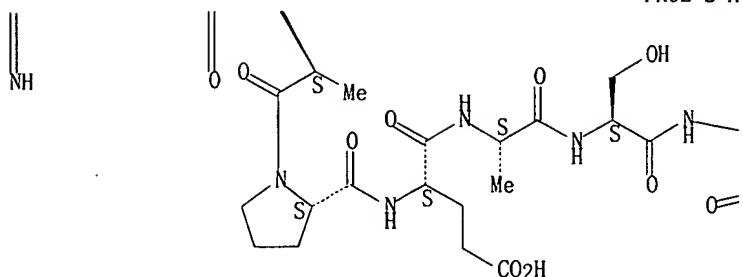
RL P Roles from patents: PRP (Properties)

Absolute stereochemistry.

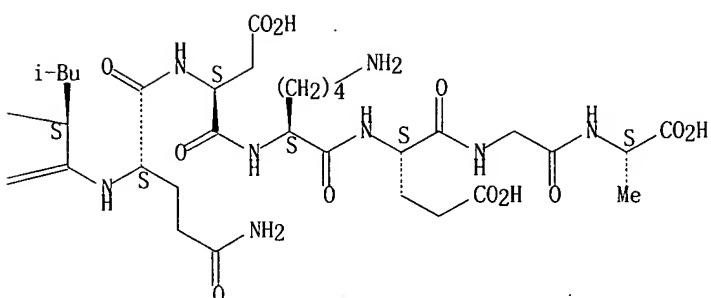
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4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L35 ANSWER 19 OF 19 REGISTRY COPYRIGHT 2005 ACS on STN .

RN 148305-84-4 REGISTRY

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CN 33: PN: W00206316 PAGE: 26 unclaimed sequence

CN 34: PN: W00053161 SEQID: 34 unclaimed protein

CN 4509: PN: W003040165 TABLE: 27a claimed protein

CN 60: PN: WO2004064863 PAGE: 94 unclaimed sequence

CN 76: PN: WO2004083372 PAGE: 143 unclaimed sequence

**FS PROTEIN SEQUENCE; STEREOSEARCH**

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PATENT ANNOTATIONS (PNTE):

Sequence | Patent

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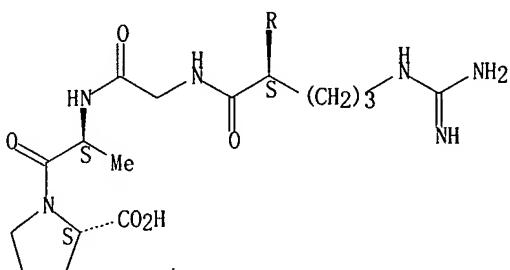
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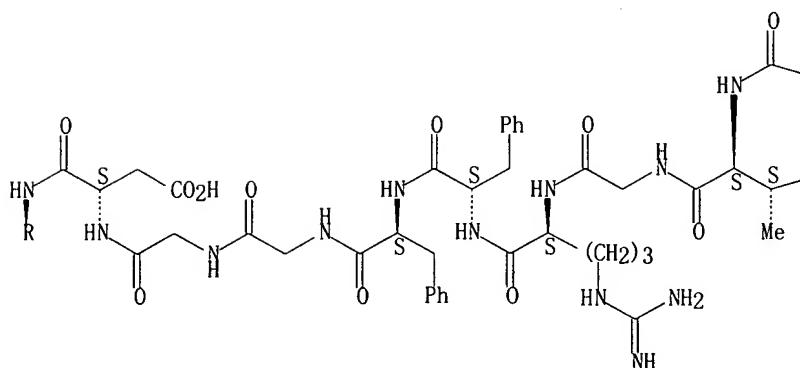
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Absolute stereochemistry.

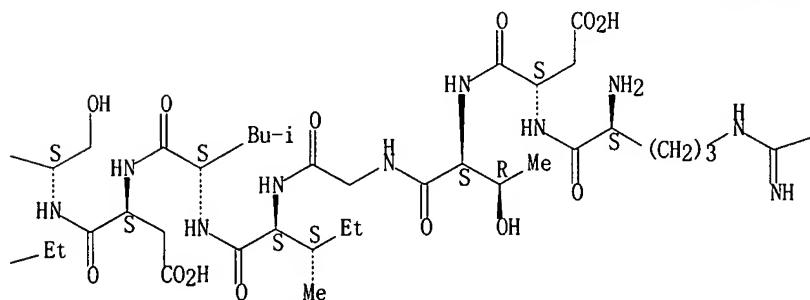
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10 REFERENCES IN FILE CA (1907 TO DATE)  
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 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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L34 ANSWER 1 OF 169 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:160730 HCAPLUS  
 ED Entered STN: 25 Feb 2005  
 TI Cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compounds in transgenic host cells  
 IN Loria, Rosemary; Crane, Brain; Kers, Johan; Gibson, Donna M.; Wach, Michael J.  
 PA USA  
 SO U. S. Pat. Appl. Publ., 55 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C12Q001-68  
 ICS C07H021-04; C12N009-08  
 NCL 435006000; 435191000; 435069100; 435320100; 435325000; 536023200  
 CC 7-2 (Enzymes)  
 Section cross-reference(s): 3, 10, 16  
 FAN. CNT 2  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005042645	A1	20050224	US 2004-858706	20040602 <--

PRAI US 2003-475111P P 20030602 &lt;--

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 20050042645	ICM	C12Q001-68
	ICS	C07H021-04; C12N009-08
	NCL	435006000; 435191000; 435069100; 435320100; 435325000; 536023200

AB The present invention relates to isolated nucleic acid mols. encoding nitric oxide synthases of plant pathogenic Streptomyces and their use for catalyzing nitration and nitrosylation reactions and producing nitrated and/or nitrosylated compds. The nucleic acid sequences and the encoded amino acid sequences of nitric oxide synthases from Streptomyces acidiscabes, S. scabies, and S. turgidiscabes are disclosed. It was shown that plant pathogenic Streptomyces nitric oxide synthase participates in nitration of a peptide phycotoxin thaxtomin. The isolated nucleic acid mols. and their encoded protein or polypeptides are useful in methods for attaching a nitrogen group to a target moiety of a compound and for synthesizing a nitrogen-modified compound in a transgenic host cell. The present invention also relates to expression systems and host cells containing the nucleic acids of the present invention, as well as a method of recombinantly producing the nitric oxide synthases of the present invention.

ST Streptomyces nitric oxide synthase sequence nitration nitrosylation thaxtomin; nitrogen modified compd nitric oxide synthase Streptomyces

IT Glycosides  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (amino; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Fertilizers  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (ammonium nitrate; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Functional groups  
 (aromatic, electron-rich; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT DNA sequences  
 Fermentation  
 Molecular cloning  
 Nitro group  
 Phenyl group  
 Protein motifs  
 Protein sequences  
 Streptomyces  
 Streptomyces acidiscabes  
 Streptomyces avermitilis  
 Streptomyces ipomoeae  
 Streptomyces scabiei  
 Streptomyces turgidiscabes  
 (cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Alkaloids  
 Balsams  
 Essential oils  
 Macrolides

Peptides

Phenols

Polyketides

Resins

Saponins

Steroids

Terpenes

Tetracyclines

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Transgene

RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)

(cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Aspergillus

Bacillus (bacterium genus)

Brevibacterium

Cephalosporium

Escherichia

Eubacteria

Fungi

Microbacterium

Nocardia

Penicillium

Plant cell

Rhodococcus

Saccharomyces

Yeast

(cloning host; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Nitration

Nitrosation

(enzymic; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Functional groups

(indole; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Animal cell

(insect, cloning host; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Glycans

Glycosides

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(iridoid; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Animal cell

(mammalian, cloning host; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Functional groups

(nitrogen group; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Organic compounds  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (nitrogen-containing; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Functional groups  
 (nitroso group; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Gene, microbial  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (nos; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Acids  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (organic; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Toxins  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (phytotoxins; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Antibiotics  
 Antitumor agents  
 Fungicides  
 Herbicides  
 Insecticides  
 Nematocides  
 (production of; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Functional groups  
 (tryptophanyl; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT Lactams  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (.beta.-; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 845843-22-3P 845843-23-4P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); CAT (Catalyst use); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 845843-24-5P 845843-25-6P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation)  
 (amino acid sequence; cloning and sequences of nitric oxide synthases

of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 122380-18-1, Thaxtomin A  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (biosynthesis of; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 55-63-0P, Nitroglycerin 56-75-7P, Chloramphenicol 78-11-5P, Pentaerythritol tetranitrate 118-96-7P, Trinitrotoluene 121-82-4P, Cyclotrimethylenetrinitramine 5854-93-3P, L-Alanosine  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 125978-95-2P, Nitric oxide synthase  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); CAT (Catalyst use); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 845843-32-5P 845843-33-6P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation)  
 (cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 667853-11-4, GenBank AY204507 667853-13-6, GenBank AY204508  
 667853-15-8, GenBank AY204509  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 845843-19-8, DNA (Streptomyces acidiscabies gene nos) 845843-20-1, DNA (Streptomyces scabiei gene nos) 845843-21-2  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (nucleotide sequence; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 845830-96-8 845830-98-0 845830-99-1 845831-00-7 845831-01-8  
 845831-02-9 845831-03-0 845831-04-1 845831-05-2  
 845831-06-3 845831-07-4 845831-08-5 845831-09-6 845831-10-9  
 845831-11-0 845831-12-1 845831-13-2 845831-14-3 845831-15-4  
 845831-16-5 845831-17-6 845831-18-7 845831-19-8  
 845831-20-1 845831-21-2 845831-22-3 845831-23-4 845831-24-5  
 845831-25-6 845831-26-7 845831-27-8 845831-28-9 845831-29-0  
 845843-26-7 845843-27-8 845843-28-9 845843-29-0 845843-30-3  
 845843-31-4  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (protein motif; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of nitrogen-modified compds. in transgenic host cells)

IT 845847-69-0 845847-70-3 845847-71-4 845847-72-5 845847-73-6  
 845847-74-7 845847-75-8 845847-76-9 845847-77-0 845858-32-4  
 RL: PRP (Properties)  
 (unclaimed protein sequence; cloning and sequences of nitric oxide synthases of plant pathogenic Streptomyces and uses for production of

IT nitrogen-modified compds. in transgenic host cells)  
 IT 845847-78-1 845847-79-2  
 RL: PRP (Properties)  
 (unclaimed sequence; cloning and sequences of nitric oxide synthases of  
 plant pathogenic Streptomyces and uses for production of nitrogen-modified  
 compds. in transgenic host cells)

L34 ANSWER 2 OF 169 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:140586 HCPLUS  
 DN 142:236080  
 ED Entered STN: 18 Feb 2005  
 TI Continuous-flow method for preparing microparticles for potential use in  
 gene therapy or antisense therapy, vaccination, treatment of autoimmune  
 disease  
 IN Tyo, Michael; Hsu, Yung-yueh; Hedley, Mary Lynne  
 PA Zycos Inc., USA  
 SO U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Ser. No. 715,708,  
 abandoned.  
 CODEN: USXXC0  
 DT Patent  
 LA English  
 IC ICM C12N015-87  
 ICS A61K009-14; B29C039-10  
 NCL 424489000; 435459000; 264004000  
 CC 9-16 (Biochemical Methods)  
 Section cross-reference(s): 3, 15, 63

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005037086	A1	20050217	US 2004-758970	20040116 <--
PRAI US 1999-166516P	P	19991119		
US 2000-715708	B1	20001117		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005037086	ICM	C12N015-87
	ICS	A61K009-14; B29C039-10
	NCL	424489000; 435459000; 264004000

AB The invention is based on the discovery of a method for scalable,  
 continuous flow production of a nucleic acid-containing microparticle that  
 maintains the structural integrity of the associated nucleic acid and results  
 in a microparticle having a purity suitable for introduction into an  
 animal (e.g., human) host. Microparticles prepared according to the  
 continuous flow processes described herein can be used for delivery of a  
 nucleic acid for gene therapy, antisense therapy, vaccination, treatment  
 of autoimmune disease, and either specific or non-specific modulation of  
 an immune response (e.g., via cytokine regulation). The microparticles  
 can addnl. be used to deliver nucleic acid encoding a protein or peptide  
 useful in any type of therapy.

ST flow prepn microparticle antisense gene therapy autoimmune disease  
 vaccination

IT Screens (mesh)  
 (Fine-mesh; continuous-flow method for preparing microparticles for  
 potential use in gene therapy or antisense therapy, vaccination,  
 treatment of autoimmune disease)

IT Vacuum  
 (Partial; continuous-flow method for preparing microparticles for  
 potential use in gene therapy or antisense therapy, vaccination,  
 treatment of autoimmune disease)

IT Drying  
 (air; continuous-flow method for preparing microparticles for potential

use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Homogenization  
(apparatus, tip; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Molecular weight  
(average; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Polymers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(biodegradable; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Containers  
(cartridges, Hollow-fiber; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Agitation (mechanical)  
Animal  
Autoimmune disease  
Bioreactors  
Buffers  
Filtration  
Freeze drying  
Gene therapy  
Human  
Microparticles  
Stabilizing agents  
Ultrafilters  
(continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Carbohydrates, uses  
Lipids, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Mixers (processing apparatus)  
(homogenization apparatus, tip; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Cytokines  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(regulation for modulation of immune response; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT DNA  
RL: PUR (Purification or recovery); PREP (Preparation)  
(supercoiled circular; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Antisense oligonucleotides  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(therapy; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT Immunization  
(vaccination; continuous-flow method for preparing microparticles for

potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT 77-86-1, TRIS buffer  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (-EDTA; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT 60-00-4, EDTA, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (Tris-; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT 115505-57-2 115505-63-0 115505-64-1 115521-13-6 119261-00-6  
 119401-82-0 124470-29-7 127424-82-2 133209-09-3 133295-51-9  
 136182-67-7 136494-37-6 137354-10-0 137354-11-1 144449-86-5  
 145151-52-6 146554-61-2 147820-47-1 147934-24-5 148305-84-4  
 148305-88-8 148305-93-5 149383-25-5 151423-78-8 151423-83-5  
 151456-29-0 151808-57-0 151808-59-2 152015-90-2 152074-99-2  
 152244-23-0 152244-24-1 152846-82-7 153607-10-4 153607-14-8  
 153607-19-3 153607-20-6 153607-21-7 154330-44-6 154330-45-7  
 154427-29-9 154652-68-3 155970-24-4 157048-07-2 158092-80-9  
 158563-04-3 158563-18-9 160040-01-7 160040-02-8 160040-10-8  
 160040-16-4 160040-20-0 160040-28-8 160040-31-3 160212-35-1  
 160212-75-9 160212-76-0 160212-93-1 160214-77-7 160216-13-7  
 160216-22-8 160216-59-1 160216-60-4 160295-81-8 160790-21-6  
 160983-12-0 162558-08-9 162558-10-3 162558-12-5 163816-00-0  
 166188-11-0 167319-68-8 167319-80-4 169896-35-9 170173-06-5  
 170294-35-6 182620-15-1 182620-16-2 192066-10-7 207976-41-8  
 223413-45-4 292633-20-6 292633-21-7 292633-22-8 292633-24-0  
 292633-26-2 292633-27-3 292633-28-4 292633-30-8 292633-31-9  
 292859-36-0 292859-37-1 292859-39-3 292859-40-6 292859-41-7  
 292859-42-8 292859-43-9 292859-44-0 292859-45-1 292859-46-2  
 292859-48-4 292859-49-5 331413-55-9 331413-56-0 380649-63-8  
 RL: PRP (Properties)  
 (Unclaimed; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT 75-09-2, Dichloromethane, uses 7732-18-5, Water, uses 9002-89-5, PVA  
 9003-07-0, Polypropylene 34346-01-5  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT 844906-32-7  
 RL: PRP (Properties)  
 (unclaimed protein sequence; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

IT 210629-19-9 210629-20-2 292633-18-2  
 RL: PRP (Properties)  
 (unclaimed sequence; continuous-flow method for preparing microparticles for potential use in gene therapy or antisense therapy, vaccination, treatment of autoimmune disease)

L34 ANSWER 3 OF 169 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:122713 HCPLUS  
 DN 142:217392  
 ED Entered STN: 11 Feb 2005  
 TI High affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping molecules, and therapeutic and diagnostic methods for use

IN Stahl, Neil; Yancopoulos, George D.; Karow, Margaret; Smith, Eric  
 PA USA  
 SO U.S. Pat. Appl. Publ., 39 pp., Cont.-in-part of U.S. Ser. No. 610,452.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C07H021-04  
 ICS C12P021-04; C12N009-64; C07K016-40  
 NCL 435069700; 435320100; 435325000; 435226000; 530388100; 536023200  
 CC 15-3 (Immunochemistry)  
 Section cross-reference(s): 1, 3

FAN. CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005032175	A1	20050210	US 2004-879994	20040629 <--
PRAI	US 2003-610452	A2	20030630	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005032175	ICM	C07H021-04
	ICS	C12P021-04; C12N009-64; C07K016-40
	NCL	435069700; 435320100; 435325000; 435226000; 530388100; 536023200

AB High affinity fusion proteins capable of binding and inhibiting the activity of soluble, interacting proteins ("SIPs") are described. In specific embodiments the fusion proteins, also called "trapbodies", are multimers, preferably dimers, of SIP-specific fusion polypeptides which comprise SIP binding domains derived from SIP targets and/or anti-SIP Ig domains, as well as multimerizing components. The fusion protein has combinations of domains, called IBD (ISP binding domain, one or more copies) and TBD (ISP target binding domain, one or more copies) derived from the natural binding partner for the target protein, such cytokine receptors, and an Ig domain binding the target protein, such as scFV, and a multimerizing domain called M. In particular embodiments, IL-18 or IL-6 trap constructs comprising the extracellular domain of human IL-18 receptor alpha (hIL-18Ra), antibody-human IL-18 single chain Fv (anti-hIL-18 scFv), and Fc domain of human IgG1 (Fc); or anti-human IL-6 single chain Fv (one or two copies) and Fc domain of human IgG1 (Fc) resp. are provided.

ST soluble protein trapping receptor antibody fusion construct diagnosis therapy

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(IgG, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(IgG1, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Mus musculus

(anti-IL6-ScFv of; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Ciliary neurotrophic factor

Cytokines  
 Interleukin 1  
 Interleukin 10  
 Interleukin 11  
 Interleukin 13  
 Interleukin 15  
 Interleukin 18  
 Interleukin 2  
 Interleukin 3  
 Interleukin 4  
 Interleukin 5  
 Interleukin 6  
 Interleukin 7  
 Interleukin 9

Leukemia inhibitory factor

Macrophage migration inhibitory factor

RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(capture of; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(fragments, heavy chain Fc, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

Cytokine receptors

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Human

(hIL-18Ra of; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(heavy chain, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Protein engineering

(high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Fusion proteins (chimeric proteins)

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(humanized, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Interleukin receptors

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(interleukin 18, hIL-18Ra, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(light chain, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(single chain, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(single chain, to IL-6, ScFv, fusion products; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT Interferons

RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(. gamma., capture of; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 83869-56-1, GM-CSF 106956-32-5, Oncostatin M 180132-69-8,

Cardiotrophin 1

RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(capture of; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 148784-58-1, GenBank X70421 173889-25-3, GenBank U43672 252711-37-8,

GenBank AB017433 252711-38-9, GenBank AB017434

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 152510-28-6 157414-72-7 189286-60-0 478241-55-3 481717-33-3

733021-30-2 827301-67-7 827301-84-8 827302-00-1 827302-03-4

827302-10-3 827302-13-6  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (mouse anti-IL6 Ig heavy chain CDR1; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 827301-68-8 827301-70-2 827301-76-8 827301-78-0  
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 827302-04-5 827302-11-4 827302-14-7  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (mouse anti-IL6 Ig heavy chain CDR2; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 827301-69-9 827301-71-3 827301-77-9 827301-79-1 827301-86-0  
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 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (mouse anti-IL6 Ig heavy chain CDR3; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 153288-60-9 384331-86-6 827301-72-4 827301-74-6 827301-82-6  
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 827302-16-9 827302-19-2  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (mouse anti-IL6 Ig light chain CDR1; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 162290-70-2 189286-53-1 454450-75-0 827301-80-4 827302-17-0  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (mouse anti-IL6 Ig light chain CDR2; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 827301-73-5 827301-75-7 827301-81-5 827301-83-7 827301-89-3  
 827301-91-7 827301-97-3 827301-99-5 827302-07-8 827302-09-0  
 827302-18-1 827302-20-5  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (mouse anti-IL6 Ig light chain CDR3; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 842985-39-1 842985-40-4 842985-42-6 842985-44-8 842985-46-0  
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 RL: PRP (Properties)  
 (unclaimed nucleotide sequence; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 842985-41-5 842985-43-7 842985-45-9 842985-47-1 842985-49-3  
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RL: PRP (Properties)

(unclaimed protein sequence; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

IT 501668-01-5

RL: PRP (Properties)

(unclaimed sequence; high affinity fusion proteins comprising domains of soluble interacting protein target receptor or specific antibodies as trapping mols., and therapeutic and diagnostic methods for use)

L34 ANSWER 4 OF 169 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:78095 HCAPLUS

DN 142:170103

ED Entered STN: 28 Jan 2005

TI Inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between the receptor and PDZ domain proteins

IN Garman, Jonathan David; Lu, Peter S.

PA Arbor Vita Corporation, USA

SO U. S. Pat. Appl. Publ., 111 pp., Cont.-in-part of Appl. No. PCT/US02/24655.  
 CODEN: USXXCO

DT Patent

LA English

IC ICM G01N033-53

NCL 435007500; 530350000

CC 1-11 (Pharmacology)

FAN. CNT 21

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005019841	A1	20050127	US 2003-684796	20031014 <--
	US 2003049695	A1	20030313	US 2002-80273	20020219 <--
	WO 2003014303	A2	20030220	WO 2002-US24655	20020802 <--
	WO 2003014303	A3	20030814		
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	US 2002-80273	A2	20020219	<--	
	US 2002-360061P	P	20020225	<--	
	WO 2002-US24655	A2	20020802	<--	
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US 1999-134117P	P	19990514	<--		
US 1999-134118P	P	19990514	<--		
US 1999-160860P	P	19991021	<--		
US 1999-162498P	P	19991029	<--		
US 1999-170453P	P	19991213	<--		

US 2000-176195P P 20000114 <--  
 US 2000-182296P P 20000214 <--  
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 US 2000-570364 B2 20000512 <--  
 US 2000-688017 A2 20001013 <--  
 US 2000-710059 B2 20001111 <--  
 US 2001-269522P P 20010216 <--  
 US 2001-269694P P 20010216 <--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 2005019841	ICM	G01N033-53
	NCL	435007500; 530350000

AB The invention provides reagents and methods for inhibiting or enhancing interactions between proteins in cells, particularly interactions between PDZ proteins and its binding partners (PL proteins.). In particular, these methods are used to block the interaction between .alpha.-adrenergic receptors and PDZ proteins to control the effects of .alpha.-adrenergic agonists. Interactions between .alpha.1 adrenergic receptors and PDZ proteins are identified and peptides thought to be involved in the interaction are identified.

ST adrenergic receptor PDZ domain protein interaction peptide inhibition

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MINT, PDZ domain-dependent interactions of; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (Magi-1 (membrane-associated guanylate kinase inverted 1), PDZ domain-dependent interactions of; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (PDZ domain-containing; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Interleukin 8 receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (PDZ domain-dependent interactions of; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Proteins

RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (PDZ protein ligands, peptides derived from; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (TIP-1 (tat-interacting protein 1), PDZ domain-dependent interactions of; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Signal transduction, biological

(adrenergic, modulation of; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain

proteins)

IT Peptidomimetics  
 (as inhibitors of PDZ protein interaction; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Peptides, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (as inhibitors of PDZ protein interaction; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT G protein-coupled receptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (modulating signal transduction via; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Peptides, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (reaction products, with biotin, as inhibitors of PDZ protein interaction; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Adrenoceptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (.alpha.-, blocking signaling by; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT Adrenoceptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (.alpha.2, blocking signaling by; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT 349588-13-2, GenBank AAG42364  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between receptor and PDZ domain proteins)

IT 134093-84-8, GenBank X54937 135686-70-3, GenBank X58674 136331-58-3, GenBank M65085 137749-05-4, GenBank X58454 138820-18-5, GenBank M74921 139804-63-0, GenBank M13306 139804-64-1, GenBank M13300 139843-96-2, GenBank X52068 140025-64-5, GenBank M16405 140025-87-2, GenBank J03853 140025-88-3, GenBank M34041 140028-59-7, GenBank M30625 140065-94-7, GenBank M28269 140274-61-9, GenBank M23533 140344-27-0, GenBank M64799 140507-36-4, GenBank M13299 140513-10-6, GenBank M37128 140571-97-7, GenBank M76672 140571-98-8, GenBank M76673 140832-44-6, GenBank X64994 141005-50-7, GenBank X64995 141374-05-2, GenBank X64878 141683-51-4, GenBank M84605 142318-39-6, GenBank M91467 142318-54-5, GenBank D90348 142367-33-7, GenBank M89955 142830-33-9, GenBank M91464 143719-67-9, GenBank L01639 144517-42-0, GenBank S62045 144532-01-4, GenBank D10995 144844-26-8, GenBank S42168 145258-28-2, GenBank L04308 146003-11-4, GenBank L03380 146737-06-6, GenBank M96738 148284-20-2, GenBank L08893 148664-97-5, GenBank L13605 148997-16-4, GenBank S45235 150219-64-0, GenBank X55758 151493-95-7, GenBank U01104 151682-01-8, GenBank U03642 153270-04-3, GenBank U03469 154898-22-3, GenBank X77130 154983-49-0, GenBank X77307 155120-40-4, GenBank D28538 155356-30-2, GenBank U07225 155609-52-2, GenBank U03864 156677-42-8, GenBank U11087 156889-64-4, GenBank U11271 157150-22-6, GenBank X80391 157963-24-1, GenBank U10504 158108-79-3, GenBank U11053 158128-03-1, GenBank U13218 158480-68-3, GenBank X81086 158643-88-0, GenBank U13897 159126-73-5, GenBank D31833 160103-06-0, GenBank U13852 160475-73-0, GenBank L35475 163239-69-8, GenBank U20350 163378-55-0, GenBank L40764 163985-37-3, GenBank U20860

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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
 (Biological study)

(inhibiting .alpha.-adrenergic receptor signaling by blocking  
 interaction between the receptor and PDZ domain proteins)

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 459728-52-0, GenBank CAA18783 459728-54-2, GenBank AAG41676  
 459750-29-9, GenBank AAG41677 459750-30-2, GenBank AAG42368  
 479796-51-5, GenBank CAC15482 479802-79-4, GenBank AAB59386  
 479912-64-6, GenBank AAK61266 480582-24-9, GenBank AAD05193  
 480582-47-6, GenBank AAD05195 480582-88-5, GenBank AAC64378  
 480582-90-9, GenBank AAC64377 480718-44-3, GenBank AAC15755  
 480906-46-5, GenBank AAB57794 480907-39-9, GenBank AAB59436  
 480916-66-3, GenBank AAB82060 480925-32-4, GenBank AAC08454  
 480930-39-0, GenBank AAC18915 480931-07-5, GenBank AAC24302  
 480932-31-8, GenBank AAC25625 480932-33-0, GenBank AAC25627  
 480934-25-6, GenBank AAC31763 481139-01-9, GenBank BAA19952  
 481221-98-1, GenBank AAA16365 481229-64-5, GenBank AAA20580  
 481243-00-9, GenBank AAA36434 481319-56-6, GenBank AAA62271

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
 (Biological study)

(inhibiting .alpha.-adrenergic receptor signaling by blocking  
 interaction between the receptor and PDZ domain proteins)

IT	831257-31-9	831257-32-0	831257-33-1	831257-34-2	831257-35-3
	831257-36-4	831257-37-5	831257-38-6	831257-39-7	831257-40-0
	831257-41-1	831257-42-2	831257-43-3	831257-44-4	
RL: PRP (Properties)					
(unclaimed nucleotide sequence; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between the receptor and PDZ domain proteins)					
IT	831257-30-8	831257-45-5	831257-46-6	831257-47-7	831257-48-8
	831257-49-9	831257-50-2	831257-51-3	831257-52-4	831257-53-5
	831257-54-6	831257-55-7	831257-56-8	831257-57-9	831257-58-0
	831257-59-1	831257-60-4	831257-61-5	831257-62-6	831257-63-7
	831257-64-8	831257-65-9	831257-66-0	831257-67-1	831257-68-2
	831257-69-3	831257-70-6	831257-71-7	831257-72-8	831257-73-9
	831257-74-0	831257-75-1	831257-76-2	831257-77-3	831257-78-4
	831257-79-5	831257-80-8	831257-81-9	831257-82-0	831257-83-1
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	831257-89-7	831257-90-0	831257-91-1	831257-92-2	831257-93-3
	831257-94-4	831257-95-5	831257-96-6	831257-97-7	831257-98-8
	831257-99-9	831258-00-5	831258-01-6	831258-02-7	831258-03-8
	831258-04-9	831258-05-0	831258-06-1	831258-07-2	831258-08-3
	831258-09-4	831258-10-7	831258-11-8	831258-12-9	831258-13-0
	831258-14-1	831258-15-2	831258-16-3	831258-17-4	831258-18-5
	831258-19-6	831258-20-9	831258-21-0	831258-22-1	831258-23-2
	831258-24-3	831258-25-4	831258-26-5	831258-27-6	831258-28-7
	831258-29-8	831258-30-1	831258-31-2	831258-32-3	831258-33-4
	831258-34-5	831258-35-6	831258-36-7	831258-37-8	831258-38-9
	831258-39-0	831258-40-3	831258-41-4	831258-42-5	831258-43-6
	831258-44-7	831258-45-8	831258-46-9	831258-47-0	831258-48-1
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	831258-69-6	831258-70-9	831258-71-0	831258-72-1	831258-73-2
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	831258-89-0	831258-90-3	831258-91-4	831258-92-5	831258-93-6
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	831259-99-2	831259-00-8	831259-01-9	831259-02-0	831259-03-1
	831259-04-2	831259-05-3	831259-06-4	831259-07-5	831259-08-6
	831259-09-7	831259-10-0	831259-11-1	831259-12-2	831259-13-3
	831259-14-4	831259-15-5	831259-16-6	831259-17-7	831259-18-8
	831259-19-9	831259-20-2	831259-22-4	831259-23-5	831259-24-6
	831259-25-7	831259-26-8	831259-27-9	831259-28-0	831259-29-1
	831259-30-4	831259-31-5	831259-32-6	831259-33-7	831259-34-8
	831259-35-9	831259-36-0	831259-37-1	831259-38-2	831259-39-3
	831259-40-6	831259-41-7	831259-42-8	831259-43-9	831259-44-0
	831259-45-1	831259-46-2	831259-47-3	831259-48-4	831259-49-5
	831259-50-8	831259-51-9	831259-52-0	831259-53-1	831259-54-2
	831259-55-3	831259-56-4	831259-57-5	831259-58-6	831259-59-7
	831259-60-0	831259-61-1	831259-62-2	831259-63-3	831259-64-4
	831259-65-5	831259-66-6	831259-67-7	831259-68-8	831259-69-9
	831259-70-2	831259-71-3	831259-72-4	831259-73-5	831259-74-6
	831259-75-7	831259-76-8			
RL: PRP (Properties)					
(unclaimed protein sequence; inhibiting .alpha.-adrenergic receptor signaling by blocking interaction between the receptor and PDZ domain proteins)					
IT	193145-90-3	309260-00-2	309260-01-3	309260-09-1	<b>309260-10-4</b>
	309260-11-5	309260-12-6	309260-14-8	499768-34-2	499768-35-3
	499768-58-0	499768-63-7	499768-74-0	499768-76-2	499768-77-3

499768-78-4	499768-79-5	499768-80-8	499768-81-9	499768-87-5
499768-88-6	699010-52-1	713494-32-7	757977-35-8	831179-61-4
831179-62-5	831179-63-6	831179-64-7	831179-65-8	831179-66-9
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831179-72-7	831179-73-8	831179-75-0	831179-78-3	831179-79-4
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831179-90-9	831179-91-0	831179-93-2	831179-95-4	831179-97-6
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831180-27-9	831180-28-0	831180-29-1	831180-30-4	831180-31-5
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831180-42-8	831180-43-9	831180-44-0	831180-45-1	831180-46-2
831180-47-3	831180-48-4	831180-49-5	831180-50-8	831180-51-9
831180-52-0	831180-53-1	831180-54-2	831180-55-3	831180-56-4
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831180-62-2	831180-63-3	831180-64-4	831180-65-5	831180-66-6
831180-67-7	831180-68-8	831180-69-9	831180-70-2	831180-71-3
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831180-97-3	831180-98-4	831180-99-5	831181-00-1	831181-01-2
831181-02-3	831181-03-4	831181-04-5	831181-05-6	831181-06-7
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831181-37-4	831181-39-6	831181-41-0	831181-43-2	831181-45-4
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831181-87-4	831181-89-6	831181-91-0	831181-93-2	831181-95-4
831181-97-6	831181-99-8	831182-01-5	831182-03-7	831182-05-9
831182-07-1	831182-09-3	831182-11-7	831182-13-9	831182-15-1
831182-17-3	831182-19-5	831182-21-9	831182-23-1	831182-25-3
831182-27-5	831182-29-7	831182-31-1	831182-33-3	831182-35-5
831182-37-7	831182-39-9	831182-41-3	831182-43-5	831182-45-7
831182-47-9	831182-48-0	831182-49-1	831182-50-4	831182-51-5
831182-52-6	831182-53-7	831182-54-8	831182-55-9	831182-56-0
831182-57-1	831182-58-2	831182-59-3	831182-60-6	

RL: PRP (Properties)

(unclaimed sequence; inhibiting .alpha.-adrenergic receptor signaling  
by blocking interaction between the receptor and PDZ domain proteins)

IT	831182-61-7	831182-62-8	831182-63-9	831182-64-0	831182-65-1
	831182-66-2	831182-67-3	831182-68-4	831182-69-5	831182-70-8
	831182-71-9	831182-72-0	831182-73-1	831182-74-2	831182-75-3
	831182-76-4	831182-77-5	831182-78-6	831182-79-7	831182-80-0
	831182-81-1	831182-82-2	831182-83-3	831182-84-4	831182-85-5
	831182-86-6	831182-87-7	831182-88-8	831182-89-9	831182-90-2
	831182-91-3	831182-92-4	831182-93-5	831182-94-6	831182-95-7
	831182-96-8	831182-97-9	831182-98-0	831182-99-1	831183-00-7
	831183-01-8	831183-02-9	831183-03-0	831183-04-1	831183-05-2
	831183-06-3	831183-07-4	831183-08-5	831183-09-6	831183-10-9
	831183-11-0	831183-12-1	831183-13-2	831183-14-3	831183-15-4
	831183-16-5	831183-17-6	831183-18-7	831183-19-8	831183-20-1
	831183-21-2	831183-22-3	831183-23-4	831183-24-5	831183-25-6

831183-26-7 831183-27-8 831183-28-9  
 RL: PRP (Properties)  
 (unclaimed sequence; inhibiting .alpha.-adrenergic receptor signaling  
 by blocking interaction between the receptor and PDZ domain proteins)

L34 ANSWER 5 OF 169 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:36481 HCPLUS  
 DN 142:154241  
 ED Entered STN: 14 Jan 2005  
 TI Antibodies specific to pregnancy-associated plasma protein A for diagnosis  
 and treatment of proliferative disease  
 IN Nixon, Andrew; Hogan, Shannon  
 PA Dyax Corporation, USA  
 SO U. S. Pat. Appl. Publ., 168 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C07K016-18  
 ICS C07H021-04; C12P021-04; C12N005-06  
 NCL 435069100; 435320100; 435326000; 530387100; 536023530  
 CC 15-3 (Immunochemistry)  
 Section cross-reference(s): 3, 9, 63

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005009136	A1	20050113	US 2004-783311	20040219 <--
PRAI	US 2003-448515P	P	20030219		<--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005009136	ICM	C07K016-18
	ICS	C07H021-04; C12P021-04; C12N005-06
	NCL	435069100; 435320100; 435326000; 530387100; 536023530

AB The invention provides proteins that bind to human pregnancy-associated plasma protein A (PAPP-A), an 1547 amino acid glycoprotein which can form an ~200 kDa monomer or an ~400 kDa dimer. In one form, the proteins are antibodies. In one embodiment, the proteins can inhibit the ability of PAPP-A to interact (e.g., cleave) substrates such as IGFBP-4, IGFBP-5, and IGFBP-2. These antibodies and fragments are useful for diagnosis and treatment of proliferative diseases or IGF-1-regulated growth disorders such as glioblastoma, osteosarcoma, restenosis, etc.

ST pregnancy assocd plasma protein A ligand antibody proliferative disease;  
 IGF1 disease IGFBP2 IGFBP4 IGFBP5 monoclonal antibody human PAPPA

IT Cell proliferation  
 (IGF-1-regulated; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Insulin-like growth factor-binding proteins  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (IGFBP-2; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Insulin-like growth factor-binding proteins  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (IGFBP-4; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Insulin-like growth factor-binding proteins  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (IGFBP-5; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (IgG; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Proteins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (PAPP-A (pregnancy-associated plasma protein A); antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Heart, disease  
 (angina pectoris; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Artery  
 (angioplasty; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Cardiovascular system, disease  
 Cytotoxic agents  
 DNA sequences  
 Drug delivery systems  
 Human  
 Labels  
 Molecular cloning  
 Nucleic acid hybridization  
 Phage display library  
 Protein sequences  
 Signal transduction, biological  
 Surgery  
 (antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Promoter (genetic element)  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Insulin-like growth factor-binding proteins  
 Ligands  
 Nucleic acids  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Biology  
 (cell, host; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (chimeric; antibodies specific to pregnancy-associated plasma protein A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (conjugates; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Artery, disease  
 (coronary, restenosis; antibodies specific to pregnancy-associated plasma  
 protein A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (fragments; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Neuroglia, neoplasm  
 (glioblastoma; antibodies specific to pregnancy-associated plasma protein  
 A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (heavy chain; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (humanized; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Heart, disease  
 (infarction; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (light chain; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Spinal cord  
 (lumbar, puncture; antibodies specific to pregnancy-associated plasma  
 protein A for diagnosis and treatment of proliferative disease)

IT Antibodies and Immunoglobulins  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (monoclonal; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT Bone, neoplasm  
 Sarcoma  
 (osteosarcoma; antibodies specific to pregnancy-associated plasma protein  
 A for diagnosis and treatment of proliferative disease)

IT Disease, animal  
 (proliferative; antibodies specific to pregnancy-associated plasma protein  
 A for diagnosis and treatment of proliferative disease)

IT Artery, disease  
 (restenosis; antibodies specific to pregnancy-associated plasma protein A  
 for diagnosis and treatment of proliferative disease)

IT 827352-24-9P 827352-25-0P 827352-27-2P 827352-29-4P 827352-31-8P  
 827352-33-0P 827352-35-2P 827352-37-4P 827352-39-6P 827352-41-0P  
 827352-43-2P 827352-45-4P 827352-47-6P 827352-49-8P 827352-51-2P  
 827352-53-4P 827352-55-6P 827352-57-8P 827352-59-0P 827352-61-4P

827352-63-6P 827352-65-8P 827352-67-0P 827352-69-2P 827352-71-6P  
 827352-73-8P 827352-75-0P 827352-77-2P 827352-79-4P 827352-81-8P  
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 827352-93-2P 827352-95-4P 827352-97-6P 827352-99-8P 827353-01-5P  
 827353-03-7P 827353-05-9P 827353-07-1P 827353-09-3P 827353-11-7P  
 827353-13-9P 827353-15-1P 827353-17-3P 827353-19-5P 827353-21-9P  
 827353-23-1P 827353-25-3P 827353-27-5P 827353-29-7P 827353-31-1P  
 827353-33-3P 827353-35-5P 827353-37-7P 827353-39-9P 827353-41-3P  
 827353-43-5P 827353-45-7P 827353-47-9P 827353-49-1P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence; antibodies specific to pregnancy-associated plasma  
 protein A for diagnosis and treatment of proliferative disease)

IT 149544-29-6 149544-30-9 173480-60-9 187593-10-8 194803-74-2  
 217478-51-8 220540-59-0 220999-09-7 250143-99-8 268723-85-9  
 268723-88-2 280106-91-4 280106-92-5 280107-04-2 302543-67-5  
 328897-78-5 384331-87-7 444846-04-2 459124-39-1 500188-12-5  
 548462-91-5 628723-83-1 671233-03-7 719271-55-3 719283-65-5  
 765901-74-4 827300-24-3 827300-25-4 827300-26-5 827300-27-6  
 827300-28-7 827300-29-8 827300-30-1 827300-31-2 827300-32-3  
 827300-33-4 827300-34-5 827300-35-6 827300-36-7 827300-37-8  
 827300-38-9 827300-39-0 827300-40-3 827300-41-4 827300-42-5  
 827300-43-6 827300-44-7 827300-45-8 827300-46-9 827300-47-0  
 827300-48-1 827300-49-2 827300-50-5 827300-51-6 827300-52-7  
 827300-53-8 827300-54-9 827300-55-0 827300-56-1 827300-57-2  
 827300-58-3 827300-59-4 827300-60-7 827300-61-8 827300-62-9  
 827300-63-0 827300-64-1 827300-65-2 827300-66-3 827300-67-4  
 827300-68-5 827300-69-6 827300-70-9 827300-71-0 827300-72-1  
 827300-73-2 827300-74-3 827300-75-4 827300-76-5 827300-77-6  
 827300-78-7 827300-79-8 827300-80-1 827300-81-2 827300-82-3  
 827300-83-4 827300-84-5 827300-85-6 827300-86-7 827300-87-8  
 827300-88-9 827300-89-0 827300-90-3 827300-91-4 827300-92-5  
 827300-93-6 827300-94-7 827300-95-8 827300-96-9 827300-97-0  
 827300-98-1 827300-99-2 827301-00-8 827301-01-9 827301-02-0  
 827301-03-1 827301-04-2 827301-05-3 827301-06-4 827301-07-5  
 827301-08-6 827301-09-7 827301-10-0 827301-11-1 827301-12-2  
 827301-13-3 827301-14-4 827301-15-5 827301-16-6 827301-17-7  
 827301-18-8 827301-19-9 827301-20-2 827301-21-3 827301-22-4  
 827301-23-5 827301-24-6 827301-25-7 827301-26-8 827301-27-9  
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 827301-33-7 827301-34-8 827301-35-9 827301-36-0 827301-37-1  
 827301-38-2 827301-39-3 827301-40-6 827301-41-7 827301-42-8  
 827301-43-9 827301-44-0 827301-45-1 827301-46-2 827301-47-3  
 827301-48-4 827301-49-5 827301-50-8 827301-51-9 827301-52-0  
 827301-53-1 827301-54-2 827301-55-3 827301-56-4 827301-57-5  
 827301-58-6 827301-59-7 827301-60-0 827301-61-1 827301-62-2  
 827301-63-3 827301-64-4 827301-65-5 827301-66-6 827351-36-0  
 827351-37-1 827351-38-2 827351-39-3 827351-40-6 827351-41-7  
 827351-42-8 827351-43-9 827351-44-0 827351-45-1 827351-46-2  
 827351-47-3 827351-48-4 827351-49-5 827351-50-8 827351-51-9  
 827351-52-0 827351-53-1 827351-54-2 827351-55-3 827351-56-4  
 827351-57-5 827351-58-6 827351-59-7 827351-61-1 827351-63-3

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antibodies specific to pregnancy-associated plasma protein A for  
 diagnosis and treatment of proliferative disease)

IT 61912-98-9, IGF 67763-96-6, IGF-1  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antibodies specific to pregnancy-associated plasma protein A for

diagnosis and treatment of proliferative disease)

IT 827352-26-1P 827352-28-3P 827352-30-7P 827352-32-9P 827352-34-1P  
 827352-36-3P 827352-38-5P 827352-40-9P 827352-42-1P 827352-44-3P  
 827352-46-5P 827352-48-7P 827352-50-1P 827352-52-3P 827352-54-5P  
 827352-56-7P 827352-58-9P 827352-60-3P 827352-62-5P 827352-64-7P  
 827352-66-9P 827352-68-1P 827352-70-5P 827352-72-7P 827352-74-9P  
 827352-76-1P 827352-78-3P 827352-80-7P 827352-82-9P 827352-84-1P  
 827352-86-3P 827352-88-5P 827352-90-9P 827352-92-1P 827352-94-3P  
 827352-96-8P 827352-98-7P 827353-00-4P 827353-02-6P 827353-04-8P  
 827353-06-0P 827353-08-2P 827353-10-6P 827353-12-8P 827353-14-0P  
 827353-16-2P 827353-18-4P 827353-20-8P 827353-22-0P 827353-24-2P  
 827353-26-4P 827353-28-6P 827353-30-0P 827353-32-2P 827353-34-4P  
 827353-36-6P 827353-38-8P 827353-40-2P 827353-42-4P 827353-44-6P  
 827353-46-8P 827353-48-0P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)

(nucleotide sequence; antibodies specific to pregnancy-associated plasma  
 protein A for diagnosis and treatment of proliferative disease)

IT 827353-77-5 827353-78-6 827353-79-7 827353-80-0 827353-81-1  
 827353-82-2 827353-83-3

RL: PRP (Properties)

(unclaimed nucleotide sequence; antibodies specific to  
 pregnancy-associated plasma protein A for diagnosis and treatment of  
 proliferative disease)

IT 827353-84-4

RL: PRP (Properties)

(unclaimed protein sequence; antibodies specific to pregnancy-associated  
 plasma protein A for diagnosis and treatment of proliferative disease)

L34 ANSWER 6 OF 169 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2005:15782 HCPLUS

DN 142:107374

ED Entered STN: 07 Jan 2005

TI VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b,  
 VCIP-derived peptides, and uses for diagnosis and anti-angiogenic and  
 anti-cancer therapy

IN Wary, Kishore K.; Humtsoe, Joseph O.

PA USA

SO U.S. Pat. Appl. Publ., 73 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61K048-00

NCL 424093200; 514044000

CC 1-6 (Pharmacology)

Section cross-reference(s): 3, 7, 13

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005002904	A1	20050106	US 2004-812238	20040329 <--
PRAI US 2003-485164P	P	20030703		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005002904	ICM	A61K048-00

NCL 424093200; 514044000

AB The inventors identified vascular endothelial growth factor and type I  
 collagen inducible protein (VCIP), also known as phosphatidic acid  
 phosphatase 2b (PAP2b), in a functional assay of angiogenesis.  
 Previously, VCIP was not known to function as an integrin ligand. The

present invention discloses that VCIP-derived peptides and proteins act as integrin ligands. Expression of recombinant VCIP promoted adhesion, spreading and tyrosine phosphorylation of Fak, Shc, Cas and paxillin in endothelial cells. Since VCIP-derived peptides or proteins are capable of inhibiting specific cell-cell interactions, such inhibitors of cell-cell interactions would be useful for developing novel therapeutic approaches to treat diseases where these interactions have clear pathol.

consequences. Protein and cDNA sequences for human VCIP as well as VCIP-derived peptides are provided. For example, VCIP/PAP2b can be a novel target for anti-angiogenic, anti-cancer and anti-metastatic therapy.

ST VCIP sequence cDNA human VEGF collagen inducible protein; phosphatidate phosphatase PAP2b VCIP cDNA sequence human; human VCIP integrin ligand target antitumor antiangiogenic therapy

IT Cadherins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (E-, VCIP interacting with p120-catenin independent of; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (LEF-1 (lymphoid enhancer-binding factor 1), VCIP regulating; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Proteins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (VCIP (vascular endothelial growth factor- and type I collagen-inducible protein), (PAP2b); protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and therapy)

IT Integrins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (VCIP as ligand of; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Signal transduction, biological

(VCIP mediating; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (VCIP, /PAP2b; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Peptides, biological studies

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (VCIP-derived; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Epitopes

(VCIP; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Antibodies and Immunoglobulins

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (against VCIP; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Antiarteriosclerotics  
 (antiatherosclerotics; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Eye, disease  
 (diabetic retinopathy; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Atherosclerosis  
 (expansion of atherosclerotic lesion; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Heart  
 Placenta  
 (gene VCIP highly expressed in; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Growth factors, animal  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inducing expression of VCIP; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Heart, disease  
 (infarction; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Drug delivery systems  
 (liposomes; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Neoplasm  
 (metastasis, anti-metastatic therapy; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Diagnosis  
 (mol.; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Enzyme functional sites  
 Protein motifs  
 (of VCIP, in therapeutic peptides; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Catenins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (p120, VCIP interacting with; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Cell cycle  
 (progression; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Cytokines  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)

(proinflammatory, inducing expression of VCIP; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Angiogenesis  
 Angiogenesis inhibitors  
 Anti-inflammatory agents  
 Antiarthritics  
 Antidiabetic agents  
 Antitumor agents  
 Arthritis  
 Blood-brain barrier  
 Capillary vessel  
 Cell migration  
 Drug targets  
 Gene therapy  
 Human  
 Molecular cloning  
 Protein sequences  
 Psoriasis  
 Retroviral vectors  
 Test kits  
 Thrombosis  
 Viral vectors  
 cDNA sequences  
 (protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Brain, disease  
 (stroke; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Heart  
 (toxicity, gene VCIP highly expressed in; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Inflammation  
 Neoplasm  
 (treatment of; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Collagens, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (type I; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Blood vessel, disease  
 (vascular malformation; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Integrins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (.alpha.v.beta.3, VCIP interacting with; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Integrins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (.alpha.5.beta.1, VCIP interacting with; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as

PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT Catenins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (. beta.-, VCIP regulating; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 9025-77-8P, Phosphatidic acid phosphatase  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (2b, /PAP2b, (VCIP); protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 109319-16-6  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (VCIP co-expressed in tumor vasculature with; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 91037-75-1P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, RGD motif-containing peptide of VCIP; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 771485-43-9P 771485-60-0P 771485-65-5P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, RGD motif-containing peptide; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 771484-90-3P 771484-95-8P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, VCIP epitope; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 771485-09-7P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, VCIP lipid phosphatase domain; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 771485-14-4P 771485-19-9P 771485-25-7P  
 771485-31-5P 771485-37-1P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, lipid phosphatase domain; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 771485-48-4P 771485-54-2P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, mutated RGD motif-containing peptide; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 771485-72-4P  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence, protein motif of VCIP; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 823562-61-4DP, subfragments are claimed  
 RL: ANT (Analyte); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amino acid sequence; protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 127464-60-2, Vascular endothelial growth factor  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (protein and cDNA sequences of VEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 823562-81-8 823562-82-9 823562-83-0 823562-84-1 823562-85-2  
 823562-86-3 823562-87-4 823562-88-5 823562-89-6 823562-90-9  
 823562-91-0 823562-92-1 823562-93-2 823562-94-3 823562-95-4  
 823562-96-5 823562-97-6 823562-98-7 823562-99-8  
 RL: PRP (Properties)  
 (unclaimed nucleotide sequence; vEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, VCIP-derived peptides, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

IT 92000-76-5  
 RL: PRP (Properties)  
 (unclaimed sequence; vEGF- and type I collagen-inducible protein (VCIP), also known as PAP2b, VCIP-derived peptides, and uses for diagnosis and anti-angiogenic and anti-cancer therapy)

L34 ANSWER 7 OF 169 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:8670 HCAPLUS  
 DN 142:87720  
 ED Entered STN: 06 Jan 2005  
 TI Myxococcus xanthus genome and proteome sequences  
 IN Goldman, Barry S.; Hinkle, Gregory J.; Slater, Steven C.; Wiegand, Roger C.  
 PA Monsanto Technology, Llc, USA  
 SO U.S., 25 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C07H021-00  
 NCL 536023100; 435252300; 800013000  
 CC 3-3 (Biochemical Genetics)  
 Section cross-reference(s): 6, 10  
 FAN. CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 6833447	B1	20041221	US 2001-902540	20010710 <--
	US 6833447	B1	20041221	US 2001-902540	20010710 <--
PRAI	US 2000-217883P	P	20000710	<--	
	US 2001-902540	A	20010710	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 6833447	IC	C07H021-00
	NCL	536023100; 435252300; 800013000

AB The present invention relates to nucleic acid sequences from the bacterium, *Myxococcus xanthus* and, in particular, to genomic DNA sequences. Approx. 38,000 genomic nucleotide sequence traces derived from a double-stranded plasmid library prepared from *Myxococcus xanthus* strain DK1622 are generated and assembled into 1849 contig and singleton sequences, providing a set of about 7842 genes or partial genes and 7134 proteins. A series of predictive and homol. based methods identify proteins involved in polyketide synthesis, serine/threonine protein kinases, antibiotic resistance proteins, DNA modification and restriction enzymes, sigma factors, and nitrate pathway proteins. The invention also encompasses oligonucleotides including primers, e.g. useful for amplifying nucleic acid mols., and collections of nucleic acid mols. and oligonucleotides, e.g. in microarrays. The invention also provides constructs and transgenic cells and organisms comprising nucleic acid mols. of the invention. The invention also relates to methods of using the disclosed nucleic acid mols., oligonucleotides, proteins, fragments of proteins, and antibodies, for example, for gene identification and anal., and preparation of constructs and transgenic cells and organisms. [This abstract record is one of four records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

ST *Myxococcus xanthus* genome proteome sequence; gene sequence *Myxococcus xanthus* genome; protein sequence *Myxococcus xanthus* proteome

IT DNA sequences

Genome

Molecular cloning

*Myxococcus xanthus*

Protein sequences

(*Myxococcus xanthus* genome and proteome sequences)

IT Gene, microbial

Proteins

Proteome

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(*Myxococcus xanthus* genome and proteome sequences)

IT Plant cell

(gene cloning in; *Myxococcus xanthus* genome and proteome sequences)

IT Antibiotic resistance

(genes and proteins involved in; *Myxococcus xanthus* genome and proteome sequences)

IT Transcription factors

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(.sigma.; *Myxococcus xanthus* genome and proteome sequences)

IT 9080-03-9, Nitrite reductase

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(*Myxococcus xanthus* genome and proteome sequences)

IT 9026-43-1, Serine/threonine protein kinase 9075-08-5, Restriction endonuclease 79956-01-7, Polyketide synthetase 81457-99-0, DNA modification methylase

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

## (Myxococcus xanthus genome and proteome sequences)

IT	817167-47-8	817167-48-9	817167-49-0	817167-50-3	817167-51-4
	817167-52-5	817167-53-6	817167-54-7	817167-55-8	817167-56-9
	817167-57-0	817167-58-1	817167-59-2	817167-60-5	817167-61-6
	817167-62-7	817167-63-8	817167-64-9	817167-65-0	817167-66-1
	817167-67-2	817167-68-3	817167-69-4	817167-70-7	817167-71-8
	817167-72-9	817167-73-0	817167-74-1	817167-75-2	817167-76-3
	817167-77-4	817167-79-6	817167-80-9	817167-81-0	817167-82-1
	817167-83-2	817167-84-3	817167-85-4	817167-86-5	817167-87-6
	817167-88-7	817167-89-8	817167-90-1	817167-91-2	817167-92-3
	817167-93-4	817167-94-5	817167-95-6	817167-96-7	817167-97-8
	817167-98-9	817167-99-0	817168-01-7	817168-02-8	<b>817168-03-9</b>
	817168-04-0	817168-05-1	817168-06-2	817168-07-3	817292-69-6
	817292-70-9	817292-71-0	817292-72-1	817292-73-2	817292-74-3
	817292-75-4	817292-76-5	817292-77-6	817292-78-7	817292-79-8
	817292-80-1	817292-81-2	817292-82-3	817292-83-4	817292-84-5
	817292-85-6	817292-86-7	817292-87-8	817292-88-9	817292-89-0
	817292-90-3	817292-91-4	817292-92-5	817292-93-6	817292-94-7
	817292-95-8	817292-96-9	817292-97-0	817292-98-1	817292-99-2
	817293-00-8	817293-01-9	817293-02-0	817293-03-1	817293-04-2
	817293-05-3	817293-06-4	817293-07-5	817293-08-6	817293-09-7
	817293-10-0	817293-11-1	817293-12-2	817293-13-3	817293-14-4
	817293-15-5	817293-16-6	817293-17-7	817293-18-8	817293-19-9
	817293-20-2	817293-21-3	817293-22-4	817293-23-5	817293-24-6
	817293-25-7	817293-26-8	817293-27-9	817293-28-0	817293-29-1
	817293-30-4	817293-31-5	817293-32-6	817293-33-7	817293-34-8
	817293-35-9	817293-36-0	817293-37-1	817293-38-2	817293-39-3
	817293-40-6	817293-41-7	817293-42-8	817293-43-9	817293-44-0
	817293-45-1	817293-46-2	817293-47-3	817293-48-4	817293-49-5
	817293-50-8	817293-51-9	817293-52-0	817293-53-1	817293-54-2
	817293-55-3	817293-56-4	817293-57-5	817293-58-6	817293-59-7
	817293-60-0	817293-61-1	817293-62-2	817293-63-3	817293-64-4
	817293-65-5	817293-66-6	817293-67-7	817293-68-8	817293-69-9
	817293-70-2	817293-71-3	817293-72-4	817293-73-5	817293-74-6
	817293-75-7	817293-76-8	817293-77-9	817293-78-0	817293-79-1
	817293-80-4	817293-81-5	817293-82-6	817293-83-7	817293-84-8
	817293-85-9	817293-86-0	817293-87-1	817293-88-2	817293-89-3
	817293-90-6	817293-91-7	817293-92-8	817293-93-9	817293-94-0
	817293-95-1	817293-96-2	817293-97-3	817293-98-4	817293-99-5
	817294-00-1	817294-01-2	817294-02-3	817294-03-4	817294-04-5
	817294-05-6	817294-06-7	817294-07-8	817294-08-9	817294-09-0
	817294-10-3	817294-11-4	817294-12-5	817294-14-7	817294-15-8
	817294-16-9	817294-17-0	817294-18-1	817294-19-2	817294-20-5
	817294-21-6	817294-22-7	817294-23-8	817294-24-9	817294-25-0
	817294-26-1	817294-27-2	817294-28-3	817294-29-4	817294-30-7
	817294-31-8	817294-32-9	817294-33-0	817294-34-1	817294-35-2
	817294-36-3	817294-37-4	817294-38-5	817294-39-6	817294-40-9
	817294-41-0	817294-42-1	817294-43-2	817294-44-3	817294-45-4

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; Myxococcus xanthus genome and proteome sequences)

IT	817294-46-5	817294-47-6	817294-48-7	817294-49-8	817294-50-1
	817294-51-2	817294-52-3	817294-53-4	817294-54-5	817294-55-6
	817294-56-7	817294-57-8	817294-58-9	817294-59-0	817294-60-3
	817294-61-4	817294-62-5	817294-63-6	817294-64-7	817294-65-8
	817294-66-9	817294-67-0	817294-68-1	817294-69-2	817294-70-5
	817294-71-6	817294-72-7	817294-73-8	817294-74-9	817294-75-0
	817294-76-1	817294-77-2	817294-78-3	817294-79-4	817294-80-7
	817294-81-8	817294-82-9	817294-83-0	817294-84-1	817294-85-2
	817294-86-3	817294-87-4	817294-88-5	817294-89-6	817294-90-9
	817294-91-0	817294-92-1	817294-93-2	817294-94-3	817294-95-4

817294-96-5	817294-97-6	817294-98-7	817294-99-8	817295-00-4
817295-01-5	817295-02-6	817295-03-7	817295-04-8	817295-05-9
817295-06-0	817295-07-1	817295-08-2	817295-09-3	817295-10-6
817295-11-7	817295-12-8	817295-13-9	817295-14-0	817295-15-1
817295-16-2	817295-17-3	817295-18-4	817295-19-5	817295-20-8
817295-21-9	817295-22-0	817295-23-1	817295-24-2	817295-25-3
817295-26-4	817295-27-5	817295-28-6	817295-29-7	817295-30-0
817295-31-1	817295-32-2	817295-33-3	817295-34-4	817295-35-5
817295-36-6	817295-37-7	817295-38-8	817295-39-9	817295-40-2
817295-41-3	817295-42-4	817295-43-5	817295-44-6	817295-45-7
817295-46-8	817295-47-9	817295-48-0	817295-49-1	817295-50-4
817295-51-5	817295-52-6	817295-53-7	817295-54-8	817295-55-9
817295-56-0	817295-57-1	817295-58-2	817295-59-3	817295-60-6
817295-61-7	817295-62-8	817295-63-9	817295-64-0	817295-65-1
817295-66-2	817295-67-3	817295-68-4	817295-69-5	817295-70-8
817295-71-9	817295-72-0	817295-73-1	817295-74-2	817295-75-3
817295-76-4	817295-77-5	817295-78-6	817295-79-7	817295-80-0
817295-81-1	817295-82-2	817295-83-3	817295-84-4	817295-85-5
817295-86-6	817295-87-7	817295-88-8	817295-89-9	817295-90-2
817295-91-3	817295-92-4	817295-93-5	817295-94-6	817295-95-7
817295-96-8	817295-97-9	817295-98-0	817295-99-1	817296-00-7
817296-01-8	817296-02-9	817296-03-0	817296-04-1	817296-05-2
817296-06-3	817296-07-4	817296-08-5	817296-09-6	817296-10-9
817296-11-0	817296-12-1	817296-13-2	817296-14-3	817296-15-4
817296-16-5	817296-17-6	817296-18-7	817296-19-8	817296-20-1
817296-21-2	817296-22-3	817296-23-4	817296-24-5	817296-25-6
817296-26-7	817296-27-8	817296-28-9	817296-29-0	817296-30-3
817296-31-4	817296-32-5	817296-33-6	817296-34-7	817296-35-8
817296-36-9	817296-37-0	817296-38-1	817296-39-2	817296-40-5
817296-41-6	817296-42-7	817296-43-8	817296-44-9	817296-45-0
817296-46-1	817296-47-2	817296-48-3	817296-49-4	817296-50-7
817296-51-8	817296-52-9	817296-53-0	817296-54-1	817296-55-2
817296-56-3	817296-57-4	817296-58-5	817296-59-6	817296-60-9
817296-61-0	817296-62-1	817296-63-2	817296-64-3	817296-65-4
817296-66-5	817296-67-6	817296-68-7	817296-69-8	817296-70-1
817296-71-2	817296-72-3	817296-73-4	817296-74-5	817296-75-6
817296-76-7	817296-77-8	817296-78-9	817296-79-0	817296-80-3

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817296-81-4	817296-82-5	817296-83-6	817296-84-7	817296-85-8
	817296-86-9	817296-87-0	817296-88-1	817296-89-2	817296-90-5
	817296-91-6	817296-92-7	817296-93-8	817296-94-9	817296-95-0
	817296-96-1	817296-97-2	817296-98-3	817296-99-4	817297-00-0
	817297-01-1	817297-02-2	817297-03-3	817297-04-4	817297-05-5
	817297-06-6	817297-07-7	817297-08-8	817297-09-9	817297-10-2
	817297-11-3	817297-12-4	817297-13-5	817297-14-6	817297-15-7
	817297-16-8	817297-17-9	817297-18-0	817297-19-1	817297-20-4
	817297-21-5	817297-22-6	817297-23-7	817297-24-8	817297-25-9
	817297-26-0	817297-27-1	817297-28-2	817297-29-3	817297-30-6
	817297-31-7	817297-32-8	817297-33-9	817297-34-0	817297-35-1
	817297-36-2	817297-37-3	817297-38-4	817297-39-5	817297-40-8
	817297-41-9	817297-42-0	817297-43-1	817297-44-2	817297-45-3
	817297-46-4	817297-47-5	817297-48-6	817297-49-7	817297-50-0
	817297-51-1	817297-52-2	817297-53-3	817297-54-4	817297-55-5
	817297-56-6	817297-57-7	817297-58-8	817297-59-9	817297-60-2
	817297-61-3	817297-62-4	817297-63-5	817297-64-6	817297-65-7
	817297-66-8	817297-67-9	817297-68-0	817297-69-1	817297-70-4
	817297-71-5	817297-72-6	817297-73-7	817297-74-8	817297-75-9
	817297-76-0	817297-77-1	817297-78-2	817297-79-3	817297-80-6
	817297-81-7	817297-82-8	817297-83-9	817297-84-0	817297-85-1

817297-86-2	817297-87-3	817297-88-4	817297-89-5	817297-90-8
817297-91-9	817297-92-0	817297-93-1	817297-94-2	817297-95-3
817297-96-4	817297-97-5	817297-98-6	817297-99-7	817298-00-3
817298-01-4	817298-02-5	817298-03-6	817298-04-7	817298-05-8
817298-06-9	817298-07-0	817298-08-1	817298-09-2	817298-10-5
817298-11-6	817298-12-7	817298-13-8	817298-14-9	817298-15-0
817298-16-1	817298-17-2	817298-18-3	817298-19-4	817298-20-7
817298-21-8	817298-22-9	817298-23-0	817298-24-1	817298-25-2
817298-26-3	817298-27-4	817298-28-5	817298-29-6	817298-30-9
817298-31-0	817298-32-1	817298-33-2	817298-34-3	817298-35-4
817298-36-5	817298-37-6	817298-38-7	817298-39-8	817298-40-1
817298-41-2	817298-42-3	817298-43-4	817298-44-5	817298-45-6
817298-46-7	817298-47-8	817298-48-9	817298-49-0	817298-50-3
817298-51-4	817298-52-5	817298-53-6	817298-54-7	817298-55-8
817298-56-9	817298-57-0	817298-58-1	817298-59-2	817298-60-5
817298-61-6	817298-62-7	817298-63-8	817298-64-9	817298-65-0
817298-66-1	817298-67-2	817298-68-3	817298-69-4	817298-70-7
817298-71-8	817298-72-9	817298-73-0	817298-74-1	817298-75-2
817298-76-3	817298-77-4	817298-78-5	817298-79-6	817298-80-9
817298-81-0	817298-82-1	817298-83-2	817298-84-3	817298-85-4
817298-86-5	817298-87-6	817298-88-7	817298-89-8	817298-90-1
817298-91-2	817298-92-3	817298-93-4	817298-94-5	817298-95-6
817298-96-7	817298-97-8	817298-98-9	817298-99-0	817299-00-6
817299-01-7	817299-02-8	817299-03-9	817299-04-0	817299-05-1
817299-06-2	817299-07-3	817299-08-4	817299-09-5	817299-10-8
817299-11-9	817299-12-0	817299-13-1	817299-14-2	817299-15-3

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences).

IT	817299-16-4	817299-17-5	817299-18-6	817299-19-7	817299-20-0
	817299-21-1	817299-22-2	817299-23-3	817299-24-4	817299-25-5
	817299-26-6	817299-27-7	817299-28-8	817299-29-9	817299-30-2
	817299-31-3	817299-32-4	817299-33-5	817299-34-6	817299-35-7
	817299-36-8	817299-37-9	817299-38-0	817299-39-1	817299-40-4
	817299-41-5	817299-42-6	817299-43-7	817299-44-8	817299-45-9
	817299-46-0	817299-47-1	817299-48-2	817299-49-3	817299-50-6
	817299-51-7	817299-52-8	817299-53-9	817299-54-0	817299-55-1
	817299-56-2	817299-57-3	817299-58-4	817299-59-5	817299-60-8
	817299-61-9	817299-62-0	817299-63-1	817299-64-2	817299-65-3
	817299-66-4	817299-67-5	817299-68-6	817299-69-7	817299-70-0
	817299-71-1	817299-72-2	817299-73-3	817299-74-4	817299-75-5
	817299-76-6	817299-77-7	817299-78-8	817299-79-9	817299-80-2
	817299-81-3	817299-82-4	817299-83-5	817299-84-6	817299-85-7
	817299-86-8	817299-87-9	817299-88-0	817299-89-1	817299-90-4
	817299-91-5	817299-92-6	817299-93-7	817299-94-8	817299-95-9
	817299-96-0	817299-97-1	817299-98-2	817299-99-3	817300-00-8
	817300-01-9	817300-02-0	817300-03-1	817300-04-2	817300-05-3
	817300-06-4	817300-07-5	817300-08-6	817300-09-7	817300-10-0
	817300-11-1	817300-12-2	817300-13-3	817300-14-4	817300-15-5
	817300-16-6	817300-17-7	817300-18-8	817300-19-9	817300-20-2
	817300-21-3	817300-22-4	817300-23-5	817300-24-6	817300-25-7
	817300-26-8	817300-27-9	817300-28-0	817300-29-1	817300-30-4
	817300-31-5	817300-32-6	817300-33-7	817300-34-8	817300-35-9
	817300-36-0	817300-37-1	817300-38-2	817300-39-3	817300-40-6
	817300-41-7	817300-42-8	817300-43-9	817300-44-0	817300-45-1
	817300-46-2	817300-47-3	817300-48-4	817300-49-5	817300-50-8
	817300-51-9	817300-52-0	817300-53-1	817300-54-2	817300-55-3
	817300-56-4	817300-57-5	817300-58-6	817300-59-7	817300-60-0
	817300-61-1	817300-62-2	817300-63-3	817300-64-4	817300-65-5
	817300-66-6	817300-67-7	817300-68-8	817300-69-9	817300-70-2
	817300-71-3	817300-72-4	817300-73-5	817300-74-6	817300-75-7

817300-76-8	817300-77-9	817300-78-0	817300-79-1	817300-80-4
817300-81-5	817300-82-6	817300-83-7	817300-84-8	817300-85-9
817300-86-0	817300-87-1	817300-88-2	817300-89-3	817300-90-6
817300-91-7	817300-92-8	817300-93-9	817300-94-0	817300-95-1
817300-96-2	817300-97-3	817300-98-4	817300-99-5	817301-00-1
817301-01-2	817301-02-3	817301-03-4	817301-04-5	817301-05-6
817301-06-7	817301-07-8	817301-08-9	817301-09-0	817301-10-3
817301-11-4	817301-12-5	817301-13-6	817301-14-7	817301-15-8
817301-16-9	817301-17-0	817301-18-1	817301-19-2	817301-20-5
817301-21-6	817301-22-7	817301-23-8	817301-24-9	817301-25-0
817301-26-1	817301-27-2	817301-28-3	817301-29-4	817301-30-7
817301-31-8	817301-32-9	817301-33-0	817301-34-1	817301-35-2
817301-36-3	817301-37-4	817301-38-5	817301-39-6	817301-40-9
817301-41-0	817301-42-1	817301-43-2	817301-44-3	817301-45-4
817301-46-5	817301-47-6	817301-48-7	817301-49-8	817301-50-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817301-51-2	817301-52-3	817301-53-4	817301-54-5	817301-55-6
	817301-56-7	817301-57-8	817301-58-9	817301-59-0	817301-60-3
	817301-61-4	817301-62-5	817301-63-6	817301-64-7	817301-65-8
	817301-66-9	817301-67-0	817301-68-1	817301-69-2	817301-70-5
	817301-71-6	817301-72-7	817301-73-8	817301-74-9	817301-75-0
	817301-76-1	817301-77-2	817301-78-3	817301-79-4	817301-80-7
	817301-81-8	817301-82-9	817301-83-0	817301-84-1	817301-85-2
	817301-86-3	817301-87-4	817301-88-5	817301-89-6	817301-90-9
	817301-91-0	817301-92-1	817301-93-2	817301-94-3	817301-95-4
	817301-96-5	817301-97-6	817301-98-7	817301-99-8	817302-00-4
	817302-01-5	817302-02-6	817302-03-7	817302-04-8	817302-05-9
	817302-06-0	817302-07-1	817302-08-2	817302-09-3	817302-10-6
	817302-11-7	817302-12-8	817302-13-9	817302-14-0	817302-15-1
	817302-16-2	817302-17-3	817302-18-4	817302-19-5	817302-20-8
	817302-21-9	817302-22-0	817302-23-1	817302-24-2	817302-25-3
	817302-26-4	817302-27-5	817302-28-6	817302-29-7	817302-30-0
	817302-31-1	817302-32-2	817302-33-3	817302-34-4	817302-35-5
	817302-36-6	817302-37-7	817302-38-8	817302-39-9	817302-40-2
	817302-41-3	817302-42-4	817302-43-5	817302-44-6	817302-45-7
	817302-46-8	817302-47-9	817302-48-0	817302-49-1	817302-50-4
	817302-51-5	817302-52-6	817302-53-7	817302-54-8	817302-55-9
	817302-56-0	817302-57-1	817302-58-2	817302-59-3	817302-60-6
	817302-61-7	817302-62-8	817302-63-9	817302-64-0	817302-65-1
	817302-66-2	817302-67-3	817302-68-4	817302-69-5	817302-70-8
	817302-71-9	817302-72-0	817302-73-1	817302-74-2	817302-75-3
	817302-76-4	817302-77-5	817302-78-6	817302-79-7	817302-80-0
	817302-81-1	817302-82-2	817302-83-3	817302-84-4	817302-85-5
	817302-86-6	817302-87-7	817302-88-8	817302-89-9	817302-90-2
	817302-91-3	817302-92-4	817302-93-5	817302-94-6	817302-95-7
	817302-96-8	817302-97-9	817302-98-0	817302-99-1	817303-00-7
	817303-01-8	817303-02-9	817303-03-0	817303-04-1	817303-05-2
	817303-06-3	817303-07-4	817303-08-5	817303-09-6	817303-10-9
	817303-11-0	817303-12-1	817303-13-2	817303-14-3	817303-15-4
	817303-16-5	817303-17-6	817303-18-7	817303-19-8	817303-20-1
	817303-21-2	817303-22-3	817303-23-4	817303-24-5	817303-25-6
	817303-26-7	817303-27-8	817303-28-9	817303-29-0	817303-30-3
	817303-31-4	817303-32-5	817303-33-6	817303-34-7	817303-35-8
	817303-36-9	817303-37-0	817303-38-1	817303-39-2	817303-40-5
	817303-41-6	817303-42-7	817303-43-8	817303-44-9	817303-45-0
	817303-46-1	817303-47-2	817303-48-3	817303-49-4	817303-50-7
	817303-51-8	817303-52-9	817303-53-0	817303-54-1	817303-55-2
	817303-56-3	817303-57-4	817303-58-5	817303-59-6	817303-60-9
	817303-61-0	817303-62-1	817303-63-2	817303-64-3	817303-65-4

817303-66-5	817303-67-6	817303-68-7	817303-69-8	817303-70-1
817303-71-2	817303-72-3	817303-73-4	817303-74-5	817303-75-6
817303-76-7	817303-77-8	817303-78-9	817303-79-0	817303-80-3
817303-81-4	817303-82-5	817303-83-6	817303-84-7	817303-85-8
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; <i>Myxococcus xanthus</i> genome and proteome sequences)				
IT 817303-86-9	817303-87-0	817303-88-1	817303-89-2	817303-90-5
817303-91-6	817303-92-7	817303-93-8	817303-94-9	817303-95-0
817303-96-1	817303-97-2	817303-98-3	817303-99-4	817304-00-0
817304-01-1	817304-02-2	817304-03-3	817304-04-4	817304-05-5
817304-06-6	817304-07-7	817304-08-8	817304-09-9	817304-10-2
817304-11-3	817304-12-4	817304-13-5	817304-14-6	817304-15-7
817304-16-8	817304-17-9	817304-18-0	817304-19-1	817304-20-4
817304-21-5	817304-22-6	817304-23-7	817304-24-8	817304-25-9
817304-26-0	817304-27-1	817304-28-2	817304-29-3	817304-30-6
817304-31-7	817304-32-8	817304-33-9	817304-34-0	817304-35-1
817304-36-2	817304-37-3	817304-38-4	817304-39-5	817304-40-8
817304-41-9	817304-42-0	817304-43-1	817304-44-2	817304-45-3
817304-46-4	817304-47-5	817304-48-6	817304-49-7	817304-50-0
817304-51-1	817304-52-2	817304-53-3	817304-54-4	817304-55-5
817304-56-6	817304-57-7	817304-58-8	817304-59-9	817304-60-2
817304-61-3	817304-62-4	817304-63-5	817304-64-6	817304-65-7
817304-66-8	817304-67-9	817304-68-0	817304-69-1	817304-70-4
817304-71-5	817304-72-6	817304-73-7	817304-74-8	817304-75-9
817304-76-0	817304-77-1	817304-78-2	817304-79-3	817304-80-6
817304-81-7	817304-82-8	817304-83-9	817304-84-0	817304-85-1
817304-86-2	817304-87-3	817304-88-4	817304-89-5	817304-90-8
817304-91-9	817304-92-0	817304-93-1	817304-94-2	817304-95-3
817304-96-4	817304-97-5	817304-98-6	817304-99-7	817305-00-3
817305-01-4	817305-02-5	817305-03-6	817305-04-7	817305-05-8
817305-06-9	817305-07-0	817305-08-1	817305-09-2	817305-10-5
817305-11-6	817305-12-7	817305-13-8	817305-14-9	817305-15-0
817305-16-1	817305-17-2	817305-18-3	817305-19-4	817305-20-7
817305-21-8	817305-22-9	817305-23-0	817305-24-1	817305-25-2
817305-26-3	817305-27-4	817305-28-5	817305-29-6	817305-30-9
817305-31-0	817305-32-1	817305-33-2	817305-34-3	817305-35-4
817305-36-5	817305-37-6	817305-38-7	817305-39-8	817305-40-1
817305-41-2	817305-42-3	817305-43-4	817305-44-5	817305-45-6
817305-46-7	817305-47-8	817305-48-9	817305-49-0	817305-50-3
817305-51-4	817305-52-5	817305-53-6	817305-54-7	817305-55-8
817305-56-9	817305-57-0	817305-58-1	817305-59-2	817305-60-5
817305-61-6	817305-62-7	817305-63-8	817305-64-9	817305-65-0
817305-66-1	817305-67-2	817305-68-3	817305-69-4	817305-70-7
817305-71-8	817305-72-9	817305-73-0	817305-74-1	817305-75-2
817305-76-3	817305-77-4	817305-78-5	817305-79-6	817305-80-9
817305-81-0	817305-82-1	817305-83-2	817305-84-3	817305-85-4
817305-86-5	817305-87-6	817305-88-7	817305-89-8	817305-90-1
817305-91-2	817305-92-3	817305-93-4	817305-94-5	817305-95-6
817305-96-7	817305-97-8	817305-98-9	817305-99-0	817306-00-6
817306-01-7	817306-02-8	817306-03-9	817306-04-0	817306-05-1
817306-06-2	817306-07-3	817306-08-4	817306-09-5	817306-10-8
817306-11-9	817306-12-0	817306-13-1	817306-14-2	817306-15-3
817306-16-4	817306-17-5	817306-18-6	817306-19-7	817306-20-0
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; <i>Myxococcus xanthus</i> genome and proteome sequences)				
IT 817306-21-1	817306-22-2	817306-23-3	817306-24-4	817306-25-5
817306-26-6	817306-27-7	817306-28-8	817306-29-9	817306-30-2
817306-31-3	817306-32-4	817306-33-5	817306-34-6	817306-35-7
817306-36-8	817306-37-9	817306-38-0	817306-39-1	817306-40-4

817306-41-5	817306-42-6	817306-43-7	817306-44-8	817306-45-9
817306-46-0	817306-47-1	817306-48-2	817306-49-3	817306-50-6
817306-51-7	817306-52-8	817306-53-9	817306-54-0	817306-55-1
817306-56-2	817306-57-3	817306-58-4	817306-59-5	817306-60-8
817306-61-9	817306-62-0	817306-63-1	817306-64-2	817306-65-3
817306-66-4	817306-67-5	817306-68-6	817306-69-7	817306-70-0
817306-71-1	817306-72-2	817306-73-3	817306-74-4	817306-75-5
817306-76-6	817306-77-7	817306-78-8	817306-79-9	817306-80-2
817306-81-3	817306-82-4	817306-83-5	817306-84-6	817306-85-7
817306-86-8	817306-87-9	817306-88-0	817306-89-1	817306-90-4
817306-91-5	817306-92-6	817306-93-7	817306-94-8	817306-95-9
817306-96-0	817306-97-1	817306-98-2	817306-99-3	817307-00-9
817307-01-0	817307-02-1	817307-03-2	817307-04-3	817307-05-4
817307-06-5	817307-07-6	817307-08-7	817307-09-8	817307-10-1
817307-11-2	817307-12-3	817307-13-4	817307-14-5	817307-15-6
817307-16-7	817307-17-8	817307-18-9	817307-19-0	817307-20-3
817307-21-4	817307-22-5	817307-23-6	817307-24-7	817307-25-8
817307-26-9	817307-27-0	817307-28-1	817307-29-2	817307-30-5
817307-31-6	817307-32-7	817307-33-8	817307-34-9	817307-35-0
817307-36-1	817307-37-2	817307-38-3	817307-39-4	817307-40-7
817307-41-8	817307-42-9	817307-43-0	817307-44-1	817307-45-2
817307-46-3	817307-47-4	817307-48-5	817307-49-6	817307-50-9
817307-51-0	817307-52-1	817307-53-2	817307-54-3	817307-55-4
817307-56-5	817307-57-6	817307-58-7	817307-59-8	817307-60-1
817307-61-2	817307-62-3	817307-63-4	817307-64-5	817307-65-6
817307-66-7	817307-67-8	817307-68-9	817307-69-0	817307-70-3
817307-71-4	817307-72-5	817307-73-6	817307-74-7	817307-75-8
817307-76-9	817307-77-0	817307-78-1	817307-79-2	817307-80-5
817307-81-6	817307-82-7	817307-83-8	817307-84-9	817307-85-0
817307-86-1	817307-87-2	817307-88-3	817307-89-4	817307-90-7
817307-91-8	817307-92-9	817307-93-0	817307-94-1	817307-95-2
817307-96-3	817307-97-4	817307-98-5	817307-99-6	817308-00-2
817308-01-3	817308-02-4	817308-03-5	817308-04-6	817308-05-7
817308-06-8	817308-07-9	817308-08-0	817308-09-1	817308-10-4
817308-11-5	817308-12-6	817308-13-7	817308-14-8	817308-15-9
817308-16-0	817308-17-1	817308-18-2	817308-19-3	817308-20-6
817308-21-7	817308-22-8	817308-23-9	817308-24-0	817308-25-1
817308-26-2	817308-27-3	817308-28-4	817308-29-5	817308-30-8
817308-31-9	817308-32-0	817308-33-1	817308-34-2	817308-35-3
817308-36-4	817308-37-5	817308-38-6	817308-39-7	817308-40-0
817308-41-1	817308-42-2	817308-43-3	817308-44-4	817308-45-5
817308-46-6	817308-47-7	817308-48-8	817308-49-9	817308-50-2
817308-51-3	817308-52-4	817308-53-5	817308-54-6	817308-55-7

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817308-56-8	817308-57-9	817308-58-0	817308-59-1	817308-60-4
	817308-61-5	817308-62-6	817308-63-7	817308-64-8	817308-65-9
	817308-66-0	817308-67-1	817308-68-2	817308-69-3	817308-70-6
	817308-71-7	817308-72-8	817308-73-9	817308-74-0	817308-75-1
	817308-76-2	817308-77-3	817308-78-4	817308-79-5	817308-80-8
	817308-81-9	817308-82-0	817308-83-1	817308-84-2	817308-85-3
	817308-86-4	817308-87-5	817308-88-6	817308-89-7	817308-90-0
	817308-91-1	817308-92-2	817308-93-3	817308-94-4	817308-95-5
	817308-96-6	817308-97-7	817308-98-8	817308-99-9	817309-00-5
	817309-01-6	817309-02-7	817309-03-8	817309-04-9	817309-05-0
	817309-06-1	817309-07-2	817309-08-3	817309-09-4	817309-10-7
	817309-11-8	817309-12-9	817309-13-0	817309-14-1	817309-15-2
	817309-16-3	817309-17-4	817309-18-5	817309-19-6	817309-20-9
	817309-21-0	817309-22-1	817309-23-2	817309-24-3	817309-25-4
	817309-26-5	817309-27-6	817309-28-7	817309-29-8	817309-30-1

817309-31-2	817309-32-3	817309-33-4	817309-34-5	817309-35-6
817309-36-7	817309-37-8	817309-38-9	817309-39-0	817309-40-3
817309-41-4	817309-42-5	817309-43-6	817309-44-7	817309-45-8
817309-46-9	817309-47-0	817309-48-1	817309-49-2	817309-50-5
817309-51-6	817309-52-7	817309-53-8	817309-54-9	817309-55-0
817309-56-1	817309-57-2	817309-58-3	817309-59-4	817309-60-7
817309-61-8	817309-62-9	817309-63-0	817309-64-1	817309-65-2
817309-66-3	817309-67-4	817309-68-5	817309-69-6	817309-70-9
817309-71-0	817309-72-1	817309-73-2	817309-74-3	817309-75-4
817309-76-5	817309-77-6	817309-78-7	817309-79-8	817309-80-1
817309-81-2	817309-82-3	817309-83-4	817309-84-5	817309-85-6
817309-86-7	817309-87-8	817309-88-9	817309-89-0	817309-90-3
817309-91-4	817309-92-5	817309-93-6	817309-94-7	817309-95-8
817309-96-9	817309-97-0	817309-98-1	817309-99-2	817310-00-2
817310-01-3	817310-02-4	817310-03-5	817310-04-6	817310-05-7
817310-06-8	817310-07-9	817310-08-0	817310-09-1	817310-10-4
817310-11-5	817310-12-6	817310-13-7	817310-14-8	817310-15-9
817310-16-0	817310-17-1	817310-18-2	817310-19-3	817310-20-6
817310-21-7	817310-22-8	817310-23-9	817310-24-0	817310-25-1
817310-26-2	817310-27-3	817310-28-4	817310-29-5	817310-30-8
817310-31-9	817310-32-0	817310-33-1	817310-34-2	817310-35-3
817310-36-4	817310-37-5	817310-38-6	817310-39-7	817310-40-0
817310-41-1	817310-42-2	817310-43-3	817310-44-4	817310-45-5
817310-46-6	817310-47-7	817310-48-8	817310-49-9	817310-50-2
817310-51-3	817310-52-4	817310-53-5	817310-54-6	817310-55-7
817310-56-8	817310-57-9	817310-58-0	817310-59-1	817310-60-4
817310-61-5	817310-62-6	817310-63-7	817310-64-8	817310-65-9
817310-66-0	817310-67-1	817310-68-2	817310-69-3	817310-70-6
817310-71-7	817310-72-8	817310-73-9	817310-74-0	817310-75-1
817310-76-2	817310-77-3	817310-78-4	817310-79-5	817310-80-8
817310-81-9	817310-82-0	817310-83-1	817310-84-2	817310-85-3
817310-86-4	817310-87-5	817310-88-6	817310-89-7	817310-90-0

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817310-91-1	817310-92-2	817310-93-3	817310-94-4	817310-95-5
	817310-96-6	817310-97-7	817310-98-8	817310-99-9	817311-00-5
	817311-01-6	817311-02-7	817311-03-8	817311-04-9	817311-05-0
	817311-06-1	817311-07-2	817311-08-3	817311-09-4	817311-10-7
	817311-11-8	817311-12-9	817311-13-0	817311-14-1	817311-15-2
	817311-16-3	817311-17-4	817311-18-5	817311-19-6	817311-20-9
	817311-21-0	817311-22-1	817311-23-2	817311-24-3	817311-25-4
	817311-26-5	817311-27-6	817311-28-7	817311-29-8	817311-30-1
	817311-31-2	817311-32-3	817311-33-4	817311-34-5	817311-35-6
	817311-36-7	817311-37-8	817311-38-9	817311-39-0	817311-40-3
	817311-41-4	817311-42-5	817311-43-6	817311-44-7	817311-45-8
	817311-46-9	817311-47-0	817311-48-1	817311-49-2	817311-50-5
	817311-51-6	817311-52-7	817311-53-8	817311-54-9	817311-55-0
	817311-56-1	817311-57-2	817311-58-3	817311-59-4	817311-60-7
	817311-61-8	817311-62-9	817311-63-0	817311-64-1	817311-65-2
	817311-66-3	817311-67-4	817311-68-5	817311-69-6	817311-70-9
	817311-71-0	817311-72-1	817311-73-2	817311-74-3	817311-75-4
	817311-76-5	817311-77-6	817311-78-7	817311-79-8	817311-80-1
	817311-81-2	817311-82-3	817311-83-4	817311-84-5	817311-85-6
	817311-86-7	817311-87-8	817311-88-9	817311-89-0	817311-90-3
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	817311-96-9	817311-97-0	817311-98-1	817311-99-2	817312-00-8
	817312-01-9	817312-02-0	817312-03-1	817312-04-2	817312-05-3
	817312-06-4	817312-07-5	817312-08-6	817312-09-7	817312-10-0
	817312-11-1	817312-12-2	817312-13-3	817312-14-4	817312-15-5
	817312-16-6	817312-17-7	817312-18-8	817312-19-9	817312-20-2

817312-21-3	817312-22-4	817312-23-5	817312-24-6	817312-25-7
817312-26-8	817312-27-9	817312-28-0	817312-29-1	817312-30-4
817312-31-5	817312-32-6	817312-33-7	817312-34-8	817312-35-9
817312-36-0	817312-37-1	817312-38-2	817312-39-3	817312-40-6
817312-41-7	817312-42-8	817312-43-9	817312-44-0	817312-45-1
817312-46-2	817312-47-3	817312-48-4	817312-49-5	817312-50-8
817312-51-9	817312-52-0	817312-53-1	817312-54-2	817312-55-3
817312-56-4	817312-57-5	817312-58-6	817312-59-7	817312-60-0
817312-61-1	817312-62-2	817312-63-3	817312-64-4	817312-65-5
817312-66-6	817312-67-7	817312-68-8	817312-69-9	817312-70-2
817312-71-3	817312-72-4	817312-73-5	817312-74-6	817312-75-7
817312-76-8	817312-77-9	817312-78-0	817312-79-1	817312-80-4
817312-81-5	817312-82-6	817312-83-7	817312-84-8	817312-85-9
817312-86-0	817312-87-1	817312-88-2	817312-89-3	817312-90-6
817312-91-7	817312-92-8	817312-93-9	817312-94-0	817312-95-1
817312-96-2	817312-97-3	817312-98-4	817312-99-5	817313-00-1
817313-01-2	817313-02-3	817313-03-4	817313-04-5	817313-05-6
817313-06-7	817313-07-8	817313-08-9	817313-09-0	817313-10-3
817313-11-4	817313-12-5	817313-13-6	817313-14-7	817313-15-8
817313-16-9	817313-17-0	817313-18-1	817313-19-2	817313-20-5
817313-21-6	817313-22-7	817313-23-8	817313-24-9	817313-25-0

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817313-26-1	817313-27-2	817313-28-3	817313-29-4	817313-30-7
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	817313-46-5	817313-47-6	817313-48-7	817313-49-8	817313-50-1
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	817313-61-4	817313-62-5	817313-63-6	817313-64-7	817313-65-8
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	817313-71-6	817313-72-7	817313-73-8	817313-74-9	817313-75-0
	817313-76-1	817313-77-2	817313-78-3	817313-79-4	817313-80-7
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	817314-46-8	817314-47-9	817314-48-0	817314-49-1	817314-50-4
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 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT 817315-61-0 817315-62-1 817315-63-2 817315-64-3 817315-65-4  
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 RL: BSU (Biological study, unclassified); BUU (Biological use,

unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT 817317-96-7 817317-97-8 817317-98-9 817317-99-0 817318-00-6  
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 817320-21-1 817320-22-2 817320-23-3 817320-24-4 817320-25-5  
 817320-26-6 817320-27-7 817320-28-8 817320-29-9 817320-30-2

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT 817320-31-3 817320-32-4 817320-33-5 817320-34-6 817320-35-7  
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817322-61-5	817322-62-6	817322-63-7	817322-64-8	817322-65-9

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817322-66-0	817322-67-1	817322-68-2	817322-69-3	817322-70-6
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	817322-76-2	817322-77-3	817322-78-4	817322-79-5	817322-80-8
	817322-81-9	817322-82-0	817322-83-1	817322-84-2	817322-85-3
	817322-86-4	817322-87-5	817322-88-6	817322-89-7	817322-90-0
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	817322-96-6	817322-97-7	817322-98-8	817322-99-9	817323-00-5
	817323-01-6	817323-02-7	817323-03-8	817323-04-9	817323-05-0
	817323-06-1	817323-07-2	817323-08-3	817323-09-4	817323-10-7
	817323-11-8	817323-12-9	817323-13-0	817323-14-1	817323-15-2
	817323-16-3	817323-17-4	817323-18-5	817323-19-6	817323-20-9
	817323-21-0	817323-22-1	817323-23-2	817323-24-3	817323-25-4
	817323-26-5	817323-27-6	817323-28-7	817323-29-8	817323-30-1
	817323-31-2	817323-32-3	817323-33-4	817323-34-5	817323-35-6
	817323-36-7	817323-37-8	817323-38-9	817323-39-0	817323-40-3
	817323-41-4	817323-42-5	817323-43-6	817323-44-7	817323-45-8
	817323-46-9	817323-47-0	817323-48-1	817323-49-2	817323-50-5
	817323-51-6	817323-52-7	817323-53-8	817323-54-9	817323-55-0
	817323-56-1	817323-57-2	817323-58-3	817323-59-4	817323-60-7
	817323-61-8	817323-62-9	817323-63-0	817323-64-1	817323-65-2

817323-66-3	817323-67-4	817323-68-5	817323-69-6	817323-70-9
817323-71-0	817323-72-1	817323-73-2	817323-74-3	817323-75-4
817323-76-5	817323-77-6	817323-78-7	817323-79-8	817323-80-1
817323-81-2	817323-82-3	817323-83-4	817323-84-5	817323-85-6
817323-86-7	817323-87-8	817323-88-9	817323-89-0	817323-90-3
817323-91-4	817323-92-5	817323-93-6	817323-94-7	817323-95-8
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817324-31-5	817324-32-6	817324-33-7	817324-34-8	817324-35-9
817324-36-0	817324-37-1	817324-38-2	817324-39-3	817324-40-6
817324-41-7	817324-42-8	817324-43-9	817324-44-0	817324-45-1
817324-46-2	817324-47-3	817324-48-4	817324-49-5	817324-50-8
817324-51-9	817324-52-0	817324-53-1	817324-54-2	817324-55-3
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817324-61-1	817324-62-2	817324-63-3	817324-64-4	817324-65-5
817324-66-6	817324-67-7	817324-68-8	817324-69-9	817324-70-2
817324-71-3	817324-72-4	817324-73-5	817324-74-6	817324-75-7
817324-76-8	817324-77-9	817324-78-0	817324-79-1	817324-80-4
817324-81-5	817324-82-6	817324-83-7	817324-84-8	817324-85-9
817324-86-0	817324-87-1	817324-88-2	817324-89-3	817324-90-6
817324-91-7	817324-92-8	817324-93-9	817324-94-0	817324-95-1
817324-96-2	817324-97-3	817324-98-4	817324-99-5	817325-00-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817325-01-2	817325-02-3	817325-03-4	817325-04-5	817325-05-6
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	817325-11-4	817325-12-5	817325-13-6	817325-14-7	817325-15-8
	817325-16-9	817325-17-0	817325-18-1	817325-19-2	817325-20-5
	817325-21-6	817325-22-7	817325-23-8	817325-24-9	817325-25-0
	817325-26-1	817325-27-2	817325-28-3	817325-29-4	817325-30-7
	817325-31-8	817325-32-9	817325-33-0	817325-34-1	817325-35-2
	817325-36-3	817325-37-4	817325-38-5	817325-39-6	817325-40-9
	817325-41-0	817325-42-1	817325-43-2	817325-44-3	817325-45-4
	817325-46-5	817325-47-6	817325-48-7	817325-49-8	817325-50-1
	817325-51-2	817325-52-3	817325-53-4	817325-54-5	817325-55-6
	817325-56-7	817325-57-8	817325-58-9	817325-59-0	817325-60-3
	817325-61-4	817325-62-5	817325-63-6	817325-64-7	817325-65-8
	817325-66-9	817325-67-0	817325-68-1	817325-69-2	817325-70-5
	817325-71-6	817325-72-7	817325-73-8	817325-74-9	817325-75-0
	817325-76-1	817325-77-2	817325-78-3	817325-79-4	817325-80-7
	817325-81-8	817325-82-9	817325-83-0	817325-84-1	817325-85-2
	817325-86-3	817325-87-4	817325-88-5	817325-89-6	817325-90-9
	817325-91-0	817325-92-1	817325-93-2	817325-94-3	817325-95-4
	817325-96-5	817325-97-6	817325-98-7	817325-99-8	817326-00-4
	817326-01-5	817326-02-6	817326-03-7	817326-04-8	817326-05-9
	817326-06-0	817326-07-1	817326-08-2	817326-09-3	817326-10-6
	817326-11-7	817326-12-8	817326-13-9	817326-14-0	817326-15-1
	817326-16-2	817326-17-3	817326-18-4	817326-19-5	817326-20-8
	817326-21-9	817326-22-0	817326-23-1	817326-24-2	817326-25-3
	817326-26-4	817326-27-5	817326-28-6	817326-29-7	817326-30-0
	817326-31-1	817326-32-2	817326-33-3	817326-34-4	817326-35-5
	817326-36-6	817326-37-7	817326-38-8	817326-39-9	817326-40-2
	817326-41-3	817326-42-4	817326-43-5	817326-44-6	817326-45-7
	817326-46-8	817326-47-9	817326-48-0	817326-49-1	817326-50-4
	817326-51-5	817326-52-6	817326-53-7	817326-54-8	817326-55-9

817326-56-0	817326-57-1	817326-58-2	817326-59-3	817326-60-6
817326-61-7	817326-62-8	817326-63-9	817326-64-0	817326-65-1
817326-66-2	817326-67-3	817326-68-4	817326-69-5	817326-70-8
817326-71-9	817326-72-0	817326-73-1	817326-74-2	817326-75-3
817326-76-4	817326-77-5	817326-78-6	817326-79-7	817326-80-0
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817326-91-3	817326-92-4	817326-93-5	817326-94-6	817326-95-7
817326-96-8	817326-97-9	817326-98-0	817326-99-1	817327-00-7
817327-01-8	817327-02-9	817327-03-0	817327-04-1	817327-05-2
817327-06-3	817327-07-4	817327-08-5	817327-09-6	817327-10-9
817327-11-0	817327-12-1	817327-13-2	817327-14-3	817327-15-4
817327-16-5	817327-17-6	817327-18-7	817327-19-8	817327-20-1
817327-21-2	817327-22-3	817327-23-4	817327-24-5	817327-25-6
817327-26-7	817327-27-8	817327-28-9	817327-29-0	817327-30-3
817327-31-4	817327-32-5	817327-33-6	817327-34-7	817327-35-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817327-36-9	817327-37-0	817327-38-1	817327-39-2	817327-40-5
	817327-41-6	817327-42-7	817327-43-8	817327-44-9	817327-45-0
	817327-46-1	817327-47-2	817327-48-3	817327-49-4	817327-50-7
	817327-51-8	817327-52-9	817327-53-0	817327-54-1	817327-55-2
	817327-56-3	817327-57-4	817327-58-5	817327-59-6	817327-60-9
	817327-61-0	817327-62-1	817327-63-2	817327-64-3	817327-65-4
	817327-66-5	817327-67-6	817327-68-7	817327-69-8	817327-70-1
	817327-71-2	817327-72-3	817327-73-4	817327-74-5	817327-75-6
	817327-76-7	817327-77-8	817327-78-9	817327-79-0	817327-80-3
	817327-81-4	817327-82-5	817327-83-6	817327-84-7	817327-85-8
	817327-86-9	817327-87-0	817327-88-1	817327-89-2	817327-90-5
	817327-91-6	817327-92-7	817327-93-8	817327-94-9	817327-95-0
	817327-96-1	817327-97-2	817327-98-3	817327-99-4	817328-00-0
	817328-01-1	817328-02-2	817328-03-3	817328-04-4	817328-05-5
	817328-06-6	817328-07-7	817328-08-8	817328-09-9	817328-10-2
	817328-11-3	817328-12-4	817328-13-5	817328-14-6	817328-15-7
	817328-16-8	817328-17-9	817328-18-0	817328-19-1	817328-20-4
	817328-21-5	817328-22-6	817328-23-7	817328-24-8	817328-25-9
	817328-26-0	817328-27-1	817328-28-2	817328-29-3	817328-30-6
	817328-31-7	817328-32-8	817328-33-9	817328-34-0	817328-35-1
	817328-36-2	817328-37-3	817328-38-4	817328-39-5	817328-40-8
	817328-41-9	817328-42-0	817328-43-1	817328-44-2	817328-45-3
	817328-46-4	817328-47-5	817328-48-6	817328-49-7	817328-50-0
	817328-51-1	817328-52-2	817328-53-3	817328-54-4	817328-55-5
	817328-56-6	817328-57-7	817328-58-8	817328-59-9	817328-60-2
	817328-61-3	817328-62-4	817328-63-5	817328-64-6	817328-65-7
	817328-66-8	817328-67-9	817328-68-0	817328-69-1	817328-70-4
	817328-71-5	817328-72-6	817328-73-7	817328-74-8	817328-75-9
	817328-76-0	817328-77-1	817328-78-2	817328-79-3	817328-80-6
	817328-81-7	817328-82-8	817328-83-9	817328-84-0	817328-85-1
	817328-86-2	817328-87-3	817328-88-4	817328-89-5	817328-90-8
	817328-91-9	817328-92-0	817328-93-1	817328-94-2	817328-95-3
	817328-96-4	817328-97-5	817328-98-6	817328-99-7	817329-00-3
	817329-01-4	817329-02-5	817329-03-6	817329-04-7	817329-05-8
	817329-06-9	817329-07-0	817329-08-1	817329-09-2	817329-10-5
	817329-11-6	817329-12-7	817329-13-8	817329-14-9	817329-15-0
	817329-16-1	817329-17-2	817329-18-3	817329-19-4	817329-20-7
	817329-21-8	817329-22-9	817329-23-0	817329-24-1	817329-25-2
	817329-26-3	817329-27-4	817329-28-5	817329-29-6	817329-30-9
	817329-31-0	817329-32-1	817329-33-2	817329-34-3	817329-35-4
	817329-36-5	817329-37-6	817329-38-7	817329-39-8	817329-40-1
	817329-41-2	817329-42-3	817329-43-4	817329-44-5	817329-45-6

817329-46-7	817329-47-8	817329-48-9	817329-49-0	817329-50-3
817329-51-4	817329-52-5	817329-53-6	817329-54-7	817329-55-8
817329-56-9	817329-57-0	817329-58-1	817329-59-2	817329-60-5
817329-61-6	817329-62-7	817329-63-8	817329-64-9	817329-65-0
817329-66-1	817329-67-2	817329-68-3	817329-69-4	817329-70-7
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; <i>Myxococcus xanthus</i> genome and proteome sequences)				
IT 817329-71-8	817329-72-9	817329-73-0	817329-74-1	817329-75-2
817329-76-3	817329-77-4	817329-78-5	817329-79-6	817329-80-9
817329-81-0	817329-82-1	817329-83-2	817329-84-3	817329-85-4
817329-86-5	817329-87-6	817329-88-7	817329-89-8	817329-90-1
817329-91-2	817329-92-3	817329-93-4	817329-94-5	817329-95-6
817329-96-7	817329-97-8	817329-98-9	817329-99-0	817330-00-0
817330-01-1	817330-02-2	817330-03-3	817330-04-4	817330-05-5
817330-06-6	817330-07-7	817330-08-8	817330-09-9	817330-10-2
817330-11-3	817330-12-4	817330-13-5	817330-14-6	817330-15-7
817330-16-8	817330-17-9	817330-18-0	817330-19-1	817330-20-4
817330-21-5	817330-22-6	817330-23-7	817330-24-8	817330-25-9
817330-26-0	817330-27-1	817330-28-2	817330-29-3	817330-30-6
817330-31-7	817330-32-8	817330-33-9	817330-34-0	817330-35-1
817330-36-2	817330-37-3	817330-38-4	817330-39-5	817330-40-8
817330-41-9	817330-42-0	817330-43-1	817330-44-2	817330-45-3
817330-46-4	817330-47-5	817330-48-6	817330-49-7	817330-50-0
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817330-56-6	817330-57-7	817330-58-8	817330-59-9	817330-60-2
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817330-66-8	817330-67-9	817330-68-0	817330-69-1	817330-70-4
817330-71-5	817330-72-6	817330-73-7	817330-74-8	817330-75-9
817330-76-0	817330-77-1	817330-78-2	817330-79-3	817330-80-6
817330-81-7	817330-82-8	817330-83-9	817330-84-0	817330-85-1
817330-86-2	817330-87-3	817330-88-4	817330-89-5	817330-90-8
817330-91-9	817330-92-0	817330-93-1	817330-94-2	817330-95-3
817330-96-4	817330-97-5	817330-98-6	817330-99-7	817331-00-3
817331-01-4	817331-02-5	817331-03-6	817331-04-7	817331-05-8
817331-06-9	817331-07-0	817331-08-1	817331-09-2	817331-10-5
817331-11-6	817331-12-7	817331-13-8	817331-14-9	817331-15-0
817331-16-1	817331-17-2	817331-18-3	817331-19-4	817331-20-7
817331-21-8	817331-22-9	817331-23-0	817331-24-1	817331-25-2
817331-26-3	817331-27-4	817331-28-5	817331-29-6	817331-30-9
817331-31-0	817331-32-1	817331-33-2	817331-34-3	817331-35-4
817331-36-5	817331-37-6	817331-38-7	817331-39-8	817331-40-1
817331-41-2	817331-42-3	817331-43-4	817331-44-5	817331-45-6
817331-46-7	817331-47-8	817331-48-9	817331-49-0	817331-50-3
817331-51-4	817331-52-5	817331-53-6	817331-54-7	817331-55-8
817331-56-9	817331-57-0	817331-58-1	817331-59-2	817331-60-5
817331-61-6	817331-62-7	817331-63-8	817331-64-9	817331-65-0
817331-66-1	817331-67-2	817331-68-3	817331-69-4	817331-70-7
817331-71-8	817331-72-9	817331-73-0	817331-74-1	817331-75-2
817331-76-3	817331-77-4	817331-78-5	817331-79-6	817331-80-9
817331-81-0	817331-82-1	817331-83-2	817331-84-3	817331-85-4
817331-86-5	817331-87-6	817331-88-7	817331-89-8	817331-90-1
817331-91-2	817331-92-3	817331-93-4	817331-94-5	817331-95-6
817331-96-7	817331-97-8	817331-98-9	817331-99-0	817332-00-6
817332-01-7	817332-02-8	817332-03-9	817332-04-0	817332-05-1
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; <i>Myxococcus xanthus</i> genome and proteome sequences)				
IT 817332-06-2	817332-07-3	817332-08-4	817332-09-5	817332-10-8
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817332-16-4	817332-17-5	817332-18-6	817332-19-7	817332-20-0

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817332-26-6	817332-27-7	817332-28-8	817332-29-9	817332-30-2
817332-31-3	817332-32-4	817332-33-5	817332-34-6	817332-35-7
817332-36-8	817332-37-9	817332-38-0	817332-39-1	817332-40-4
817332-41-5	817332-42-6	817332-43-7	817332-44-8	817332-45-9
817332-46-0	817332-47-1	817332-48-2	817332-49-3	817332-50-6
817332-51-7	817332-52-8	817332-53-9	817332-54-0	817332-55-1
817332-56-2	817332-57-3	817332-58-4	817332-59-5	817332-60-8
817332-61-9	817332-62-0	817332-63-1	817332-64-2	817332-65-3
817332-66-4	817332-67-5	817332-68-6	817332-69-7	817332-70-0
817332-71-1	817332-72-2	817332-73-3	817332-74-4	817332-75-5
817332-76-6	817332-77-7	817332-78-8	817332-79-9	817332-80-2
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817332-86-8	817332-87-9	817332-88-0	817332-89-1	817332-90-4
817332-91-5	817332-92-6	817332-93-7	817332-94-8	817332-95-9
817332-96-0	817332-97-1	817332-98-2	817332-99-3	817333-00-9
817333-01-0	817333-02-1	817333-03-2	817333-04-3	817333-05-4
817333-06-5	817333-07-6	817333-08-7	817333-09-8	817333-10-1
817333-11-2	817333-12-3	817333-13-4	817333-14-5	817333-15-6
817333-16-7	817333-17-8	817333-18-9	817333-19-0	817333-20-3
817333-21-4	817333-22-5	817333-23-6	817333-24-7	817333-25-8
817333-26-9	817333-27-0	817333-28-1	817333-29-2	817333-30-5
817333-31-6	817333-32-7	817333-33-8	817333-34-9	817333-35-0
817333-36-1	817333-37-2	817333-38-3	817333-39-4	817333-40-7
817333-41-8	817333-42-9	817333-43-0	817333-44-1	817333-45-2
817333-46-3	817333-47-4	817333-48-5	817333-49-6	817333-50-9
817333-51-0	817333-52-1	817333-53-2	817333-54-3	817333-55-4
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT	817334-41-1	817334-42-2	817334-43-3	817334-44-4	817334-45-5
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

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 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; *Myxococcus xanthus* genome and proteome sequences)

IT 14797-55-8, Nitrate, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (genes and proteins involved in metabolism of; *Myxococcus xanthus* genome and proteome sequences)

L34 ANSWER 8 OF 169 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:5209 HCAPLUS  
 DN 142:69952

ED Entered STN: 05 Jan 2005  
 TI Nucleic acid molecules and encoded proteins associated with maize and  
 their uses for plant improvement  
 IN La Rosa, Thomas J.; Zhou, Yihua; Kovalic, David; Cao, Yongwei  
 PA USA  
 SO U.S. Pat. Appl. Publ., 15 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC C07H021-04; A01H001-00; C12N015-82; C12N005-04  
 NCL 435069100; 435419000; 435468000; 530370000; 536023600; 800278000  
 CC 3-3 (Biochemical Genetics)  
 Section cross-reference(s): 6, 11

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004214272	A1	20041028	US 2003-425115	20030428 <--
	US 2004214272	A1	20041028	US 2003-425115	20030428 <--
PRAI	US 2003-425115	A	20030428	<--	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2004214272	IC	C07H021-04IC C12N005-04	A01H001-00IC	C12N015-82IC
	NCL	435069100; 435419000; 435468000; 530370000; 536023600; 800278000		

AB Recombinant polynucleotides useful for improvement of plants are provided. In particular, a total of 184, 663 cDNA sequences are provided from cDNA libraries generated from Zea mays (corn). The polypeptides encoded by these polynucleotide sequences are also provided. The open reading frame in each polynucleotide sequence is identified by a combination of predictive and homol. based methods. Functions of polypeptides are determined using a hierarchical classification tool (FunCAT) and five public classification schemes (GO\_BP, GO\_CC, GO\_MF, KEGG, and EC) and one internal Monsanto classification scheme (POI). The disclosed recombinant polynucleotides and polypeptides find use in production of transgenic plants to produce plants having improved properties. [This abstract record is one of 74 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

ST plant protein cDNA sequence transformation; corn cDNA sequence plant transformation

IT Stress, plant  
 (cold, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant  
 (heat, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Recombination, genetic  
 (homologous, improved rate of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Cell cycle  
 (improved growth rate by manipulation of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Proteins  
 RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (improved production of seed; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Growth regulators, plant

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Fats and Glyceridic oils, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Pathogen

(improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Carbohydrates, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(improved use and/or uptake of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Disease resistance, plant

Growth and development, plant

Herbicide resistance

Photosynthesis, biological

(improvement of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Embryophyta

Protein sequences

Transformation, genetic

Zea mays

cDNA sequences

(nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Proteins

cDNA

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Transcription factors

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant

(osmotic, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant

(water deficiency, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812648-02-5	812648-03-6	812648-04-7	812648-05-8	812648-06-9
812648-07-0	812648-08-1	812648-09-2	812648-10-5	812648-11-6
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812752-95-7	812752-96-8	812752-97-9	812752-98-0	812752-99-1
812753-00-7	812753-01-8	812753-02-9	812753-03-0	812753-04-1
812753-05-2	812753-06-3	812753-07-4	812753-08-5	812753-09-6
812753-10-9	812753-11-0	812753-12-1	812753-13-2	812753-14-3
812753-15-4	812753-16-5	812753-17-6	812753-18-7	812753-19-8
812753-20-1	812753-21-2	812753-22-3	812753-23-4	812753-24-5
812753-25-6	812753-26-7	812753-27-8	812753-28-9	812753-29-0

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812753-30-3	812753-31-4	812753-32-5	812753-33-6	812753-34-7
	812753-35-8	812753-36-9	812753-37-0	812753-38-1	812753-39-2
	812753-40-5	812753-41-6	812753-42-7	812753-43-8	812753-44-9
	812753-45-0	812753-46-1	812753-47-2	812753-48-3	812753-49-4
	812753-50-7	812753-51-8	812753-52-9	812753-53-0	812753-54-1
	812753-55-2	812753-56-3	812753-57-4	812753-58-5	812753-59-6
	812753-60-9	812753-61-0	812753-62-1	812753-63-2	812753-64-3
	812753-65-4	812753-66-5	812753-67-6	812753-68-7	812753-69-8
	812753-70-1	812753-71-2	812753-72-3	812753-73-4	812753-74-5
	812753-75-6	812753-76-7	812753-77-8	812753-78-9	812753-79-0
	812753-80-3	812753-81-4	812753-82-5	812753-83-6	812753-84-7
	812753-85-8	812753-86-9	812753-87-0	812753-88-1	812753-89-2
	812753-90-5	812753-91-6	812753-92-7	812753-93-8	812753-94-9
	812753-95-0	812753-96-1	812753-97-2	812753-98-3	812753-99-4
	812754-00-0	812754-01-1	812754-02-2	812754-03-3	812754-04-4
	812754-05-5	812754-06-6	812754-07-7	812754-08-8	812754-09-9
	812754-10-2	812754-11-3	812754-12-4	812754-13-5	812754-14-6
	812754-15-7	812754-16-8	812754-17-9	812754-18-0	812754-19-1
	812754-20-4	812754-21-5	812754-22-6	812754-23-7	812754-24-8
	812754-25-9	812754-26-0	812754-27-1	812754-28-2	812754-29-3
	812754-30-6	812754-31-7	812754-32-8	812754-33-9	812754-34-0
	812754-35-1	812754-36-2	812754-37-3	812754-38-4	812754-39-5
	812754-40-8	812754-41-9	812754-42-0	812754-43-1	812754-44-2
	812754-45-3	812754-46-4	812754-47-5	812754-48-6	812754-49-7

812754-50-0	812754-51-1	812754-52-2	812754-53-3	812754-54-4
812754-55-5	812754-56-6	812754-57-7	812754-58-8	812754-59-9
812754-60-2	812754-61-3	812754-62-4	812754-63-5	812754-64-6
812754-65-7	812754-66-8	812754-67-9	812754-68-0	812754-69-1
812754-70-4	812754-71-5	812754-72-6	812754-73-7	812754-74-8
812754-75-9	812754-76-0	812754-77-1	812754-78-2	812754-79-3
812754-80-6	812754-81-7	812754-82-8	812754-83-9	812754-84-0
812754-85-1	812754-86-2	812754-87-3	812754-88-4	812754-89-5
812754-90-8	812754-91-9	812754-92-0	812754-93-1	812754-94-2
812754-95-3	812754-96-4	812754-97-5	812754-98-6	812754-99-7
812755-00-3	812755-01-4	812755-02-5	812755-03-6	812755-04-7
812755-05-8	812755-06-9	812755-07-0	812755-08-1	812755-09-2
812755-10-5	812755-11-6	812755-12-7	812755-13-8	812755-14-9
812755-15-0	812755-16-1	812755-17-2	812755-18-3	812755-19-4
812755-20-7	812755-21-8	812755-22-9	812755-23-0	812755-24-1
812755-25-2	812755-26-3	812755-27-4	812755-28-5	812755-29-6
812755-30-9	812755-31-0	812755-32-1	812755-33-2	812755-34-3
812755-35-4	812755-36-5	812755-37-6	812755-38-7	812755-39-8
812755-40-1	812755-41-2	812755-42-3	812755-43-4	812755-44-5
812755-45-6	812755-46-7	812755-47-8	812755-48-9	812755-49-0
812755-50-3	812755-51-4	812755-52-5	812755-53-6	812755-54-7
812755-55-8	812755-56-9	812755-57-0	812755-58-1	812755-59-2
812755-60-5	812755-61-6	812755-62-7	812755-63-8	812755-64-9

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812755-65-0	812755-66-1	812755-67-2	812755-68-3	812755-69-4
	812755-70-7	812755-71-8	812755-72-9	812755-73-0	812755-74-1
	812755-75-2	812755-76-3	812755-77-4	812755-78-5	812755-79-6
	812755-80-9	812755-81-0	812755-82-1	812755-83-2	812755-84-3
	812755-85-4	812755-86-5	812755-87-6	812755-88-7	812755-89-8
	812755-90-1	812755-91-2	812755-92-3	812755-93-4	812755-94-5
	812755-95-6	812755-96-7	812755-97-8	812755-98-9	812755-99-0
	812756-00-6	812756-01-7	812756-02-8	812756-03-9	812756-04-0
	812756-05-1	812756-06-2	812756-07-3	812756-08-4	812756-09-5
	812756-10-8	812756-11-9	812756-12-0	812756-13-1	812756-14-2
	812756-15-3	812756-16-4	812756-17-5	812756-18-6	812756-19-7
	812756-20-0	812756-21-1	812756-22-2	812756-23-3	812756-24-4
	812756-25-5	812756-26-6	812756-27-7	812756-28-8	812756-29-9
	812756-30-2	812756-31-3	812756-32-4	812756-33-5	812756-34-6
	812756-35-7	812756-36-8	812756-37-9	812756-38-0	812756-39-1
	812756-40-4	812756-41-5	812756-42-6	812756-43-7	812756-44-8
	812756-45-9	812756-46-0	812756-47-1	812756-48-2	812756-49-3
	812756-50-6	812756-51-7	812756-52-8	812756-53-9	812756-54-0
	812756-55-1	812756-56-2	812756-57-3	812756-58-4	812756-59-5
	812756-60-8	812756-61-9	812756-62-0	812756-63-1	812756-64-2
	812756-65-3	812756-66-4	812756-67-5	812756-68-6	812756-69-7
	812756-70-0	812756-71-1	812756-72-2	812756-73-3	812756-74-4
	812756-75-5	812756-76-6	812756-77-7	812756-78-8	812756-79-9
	812756-80-2	812756-81-3	812756-82-4	812756-83-5	812756-84-6
	812756-85-7	812756-86-8	812756-87-9	812756-88-0	812756-89-1
	812756-90-4	812756-91-5	812756-92-6	812756-93-7	812756-94-8
	812756-95-9	812756-96-0	812756-97-1	812756-98-2	812756-99-3
	812757-00-9	812757-01-0	812757-02-1	812757-03-2	812757-04-3
	812757-05-4	812757-06-5	812757-07-6	812757-08-7	812757-09-8
	812757-10-1	812757-11-2	812757-12-3	812757-13-4	812757-14-5
	812757-15-6	812757-16-7	812757-17-8	812757-18-9	812757-19-0
	812757-20-3	812757-21-4	812757-22-5	812757-23-6	812757-24-7
	812757-25-8	812757-26-9	812757-27-0	812757-28-1	812757-29-2
	812757-30-5	812757-31-6	812757-32-7	812757-33-8	812757-34-9

812757-35-0 812757-36-1 812757-37-2 812757-38-3 812757-39-4  
 812757-40-7 812757-41-8 812757-42-9 812757-43-0 812757-44-1  
 812757-45-2 812757-46-3 812757-47-4 812757-48-5 812757-49-6  
 812757-50-9 812757-51-0 812757-52-1 812757-53-2 812757-54-3  
 812757-55-4 812757-56-5 812757-57-6 812757-58-7 812757-59-8  
 812757-60-1 812757-61-2 812757-62-3 812757-63-4 812757-64-5  
 812757-65-6 812757-66-7 812757-67-8 812757-68-9 812757-69-0  
 812757-70-3 812757-71-4 812757-72-5 812757-73-6 812757-74-7  
 812757-75-8 812757-76-9 812757-77-0 812757-78-1 812757-79-2  
 812757-80-5 812757-81-6 812757-82-7 812757-83-8 812757-84-9  
 812757-85-0 812757-86-1 812757-87-2 812757-88-3 812757-89-4  
 812757-90-7 812757-91-8 812757-92-9 812757-93-0 812757-94-1  
 812757-95-2 812757-96-3 812757-97-4 812757-98-5 812757-99-6

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812758-00-2	812758-01-3	812758-02-4	812758-03-5	812758-04-6
	812758-05-7	812758-06-8	812758-07-9	812758-08-0	812758-09-1
	812758-10-4	812758-11-5	812758-12-6	812758-13-7	812758-14-8
	812758-15-9	812758-16-0	812758-17-1	812758-18-2	812758-19-3
	812758-20-6	812758-21-7	812758-22-8	812758-23-9	812758-24-0
	812758-25-1	812758-26-2	812758-27-3	812758-28-4	812758-29-5
	812758-30-8	812758-31-9	812758-32-0	812758-33-1	812758-34-2
	812758-35-3	812758-36-4	812758-37-5	812758-38-6	812758-39-7
	812758-40-0	812758-41-1	812758-42-2	812758-43-3	812758-44-4
	812758-45-5	812758-46-6	812758-47-7	812758-48-8	812758-49-9
	812758-50-2	812758-51-3	812758-52-4	812758-53-5	812758-54-6
	812758-55-7	812758-56-8	812758-57-9	812758-58-0	812758-59-1
	812758-60-4	812758-61-5	812758-62-6	812758-63-7	812758-64-8
	812758-65-9	812758-66-0	812758-67-1	812758-68-2	812758-69-3
	812758-70-6	812758-71-7	812758-72-8	812758-73-9	812758-74-0
	812758-75-1	812758-76-2	812758-77-3	812758-78-4	812758-79-5
	812758-80-8	812758-81-9	812758-82-0	812758-83-1	812758-84-2
	812758-85-3	812758-86-4	812758-87-5	812758-88-6	812758-89-7
	812758-90-0	812758-91-1	812758-92-2	812758-93-3	812758-94-4
	812758-95-5	812758-96-6	812758-97-7	812758-98-8	812758-99-9
	812759-00-5	812759-01-6	812759-02-7	812759-03-8	812759-04-9
	812759-05-0	812759-06-1	812759-07-2	812759-08-3	812759-09-4
	812759-10-7	812759-11-8	812759-12-9	812759-13-0	812759-14-1
	812759-15-2	812759-16-3	812759-17-4	812759-18-5	812759-19-6
	812759-20-9	812759-21-0	812759-22-1	812759-23-2	812759-24-3
	812759-25-4	812759-26-5	812759-27-6	812759-28-7	812759-29-8
	812759-30-1	812759-31-2	812759-32-3	812759-33-4	812759-34-5
	812759-35-6	812759-36-7	812759-37-8	812759-38-9	812759-39-0
	812759-40-3	812759-41-4	812759-42-5	812759-43-6	812759-44-7
	812759-45-8	812759-46-9	812759-47-0	812759-48-1	812759-49-2
	812759-50-5	812759-51-6	812759-52-7	812759-53-8	812759-54-9
	812759-55-0	812759-56-1	812759-57-2	812759-58-3	812759-59-4
	812759-60-7	812759-61-8	812759-62-9	812759-63-0	812759-64-1
	812759-65-2	812759-66-3	812759-67-4	812759-68-5	812759-69-6
	812759-70-9	812759-71-0	812759-72-1	812759-73-2	812759-74-3
	812759-75-4	812759-76-5	812759-77-6	812759-78-7	812759-79-8
	812759-80-1	812759-81-2	812759-82-3	812759-83-4	812759-84-5
	812759-85-6	812759-86-7	812759-87-8	812759-88-9	812759-89-0
	812759-90-3	812759-91-4	812759-92-5	812759-93-6	812759-94-7
	812759-95-8	812759-96-9	812759-97-0	812759-98-1	812759-99-2
	812760-00-2	812760-01-3	812760-02-4	812760-03-5	812760-04-6
	812760-05-7	812760-06-8	812760-07-9	812760-08-0	812760-09-1
	812760-10-4	812760-11-5	812760-12-6	812760-13-7	812760-14-8
	812760-15-9	812760-16-0	812760-17-1	812760-18-2	812760-19-3

812760-20-6 812760-21-7 812760-22-8 812760-23-9 812760-24-0  
 812760-25-1 812760-26-2 812760-27-3 812760-28-4 812760-29-5  
 812760-30-8 812760-31-9 812760-32-0 812760-33-1 812760-34-2  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812760-35-3 812760-36-4 812760-37-5 812760-38-6 812760-39-7  
 812760-40-0 812760-41-1 812760-42-2 812760-43-3 812760-44-4  
 812760-45-5 812760-46-6 812760-47-7 812760-48-8 812760-49-9  
 812760-50-2 812760-51-3 812760-52-4 812760-53-5 812760-54-6  
 812760-55-7 812760-56-8 812760-57-9 812760-58-0 812760-59-1  
 812760-60-4 812760-61-5 812760-62-6 812760-63-7 812760-64-8  
 812760-65-9 812760-66-0 812760-67-1 812760-68-2 812760-69-3  
 812760-70-6 812760-71-7 812760-72-8 812760-73-9 812760-74-0  
 812760-75-1 812760-76-2 812760-77-3 812760-78-4 812760-79-5  
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 812761-20-9 812761-21-0 812761-22-1 812761-23-2 812761-24-3  
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 812761-45-8 812761-46-9 812761-47-0 812761-48-1 812761-49-2  
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 812761-60-7 812761-61-8 812761-62-9 812761-63-0 812761-64-1  
 812761-65-2 812761-66-3 812761-67-4 812761-68-5 812761-69-6  
 812761-70-9 812761-71-0 812761-72-1 812761-73-2 812761-74-3  
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 812761-90-3 812761-91-4 812761-92-5 812761-93-6 812761-94-7  
 812761-95-8 812761-96-9 812761-97-0 812761-98-1 812761-99-2  
 812762-00-8 812762-01-9 812762-02-0 812762-03-1 812762-04-2  
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 812762-10-0 812762-11-1 812762-12-2 812762-13-3 812762-14-4  
 812762-15-5 812762-16-6 812762-17-7 812762-18-8 812762-19-9  
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 812762-25-7 812762-26-8 812762-27-9 812762-28-0 812762-29-1  
 812762-30-4 812762-31-5 812762-32-6 812762-33-7 812762-34-8  
 812762-35-9 812762-36-0 812762-37-1 812762-38-2 812762-39-3  
 812762-40-6 812762-41-7 812762-42-8 812762-43-9 812762-44-0  
 812762-45-1 812762-46-2 812762-47-3 812762-48-4 812762-49-5  
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 812762-55-3 812762-56-4 812762-57-5 812762-58-6 812762-59-7  
 812762-60-0 812762-61-1 812762-62-2 812762-63-3 812762-64-4  
 812762-65-5 812762-66-6 812762-67-7 812762-68-8 812762-69-9  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812762-70-2 812762-71-3 812762-72-4 812762-73-5 812762-74-6  
 812762-75-7 812762-76-8 812762-77-9 812762-78-0 812762-79-1  
 812762-80-4 812762-81-5 812762-82-6 812762-83-7 812762-84-8

812762-85-9	812762-86-0	812762-87-1	812762-88-2	812762-89-3
812762-90-6	812762-91-7	812762-92-8	812762-93-9	812762-94-0
812762-95-1	812762-96-2	812762-97-3	812762-98-4	812762-99-5
812763-00-1	812763-01-2	812763-02-3	812763-03-4	812763-04-5
812763-05-6	812763-06-7	812763-07-8	812763-08-9	812763-09-0
812763-10-3	812763-11-4	812763-12-5	812763-13-6	812763-14-7
812763-15-8	812763-16-9	812763-17-0	812763-18-1	812763-19-2
812763-20-5	812763-21-6	812763-22-7	812763-23-8	812763-24-9
812763-25-0	812763-26-1	812763-27-2	812763-28-3	812763-29-4
812763-30-7	812763-31-8	812763-32-9	812763-33-0	812763-34-1
812763-35-2	812763-36-3	812763-37-4	812763-38-5	812763-39-6
812763-40-9	812763-41-0	812763-42-1	812763-43-2	812763-44-3
812763-45-4	812763-46-5	812763-47-6	812763-48-7	812763-49-8
812763-50-1	812763-51-2	812763-52-3	812763-53-4	812763-54-5
812763-55-6	812763-56-7	812763-57-8	812763-58-9	812763-59-0
812763-60-3	812763-61-4	812763-62-5	812763-63-6	812763-64-7
812763-65-8	812763-66-9	812763-67-0	812763-68-1	812763-69-2
812763-70-5	812763-71-6	812763-72-7	812763-73-8	812763-74-9
812763-75-0	812763-76-1	812763-77-2	812763-78-3	812763-79-4
812763-80-7	812763-81-8	812763-82-9	812763-83-0	812763-84-1
812763-85-2	812763-86-3	812763-87-4	812763-88-5	812763-89-6
812763-90-9	812763-91-0	812763-92-1	812763-93-2	812763-94-3
812763-95-4	812763-96-5	812763-97-6	812763-98-7	812763-99-8
812764-00-4	812764-01-5	812764-02-6	812764-03-7	812764-04-8
812764-05-9	812764-06-0	812764-07-1	812764-08-2	812764-09-3
812764-10-6	812764-11-7	812764-12-8	812764-13-9	812764-14-0
812764-15-1	812764-16-2	812764-17-3	812764-18-4	812764-19-5
812764-20-8	812764-21-9	812764-22-0	812764-23-1	812764-24-2
812764-25-3	812764-26-4	812764-27-5	812764-28-6	812764-29-7
812764-30-0	812764-31-1	812764-32-2	812764-33-3	812764-34-4
812764-35-5	812764-36-6	812764-37-7	812764-38-8	812764-39-9
812764-40-2	812764-41-3	812764-42-4	812764-43-5	812764-44-6
812764-45-7	812764-46-8	812764-47-9	812764-48-0	812764-49-1
812764-50-4	812764-51-5	812764-52-6	812764-53-7	812764-54-8
812764-55-9	812764-56-0	812764-57-1	812764-58-2	812764-59-3
812764-60-6	812764-61-7	812764-62-8	812764-63-9	812764-64-0
812764-65-1	812764-66-2	812764-67-3	812764-68-4	812764-69-5
812764-70-8	812764-71-9	812764-72-0	812764-73-1	812764-74-2
812764-75-3	812764-76-4	812764-77-5	812764-78-6	812764-79-7
812764-80-0	812764-81-1	812764-82-2	812764-83-3	812764-84-4
812764-85-5	812764-86-6	812764-87-7	812764-88-8	812764-89-9
812764-90-2	812764-91-3	812764-92-4	812764-93-5	812764-94-6
812764-95-7	812764-96-8	812764-97-9	812764-98-0	812764-99-1
812765-00-7	812765-01-8	812765-02-9	812765-03-0	812765-04-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812765-05-2	812765-06-3	812765-07-4	812765-08-5	812765-09-6
	812765-10-9	812765-11-0	812765-12-1	812765-13-2	812765-14-3
	812765-15-4	812765-16-5	812765-17-6	812765-18-7	812765-19-8
	812765-20-1	812765-21-2	812765-22-3	812765-23-4	812765-24-5
	812765-25-6	812765-26-7	812765-27-8	812765-28-9	812765-29-0
	812765-30-3	812765-31-4	812765-32-5	812765-33-6	812765-34-7
	812765-35-8	812765-36-9	812765-37-0	812765-38-1	812765-39-2
	812765-40-5	812765-41-6	812765-42-7	812765-43-8	812765-44-9
	812765-45-0	812765-46-1	812765-47-2	812765-48-3	812765-49-4
	812765-50-7	812765-51-8	812765-52-9	812765-53-0	812765-54-1
	812765-55-2	812765-56-3	812765-57-4	812765-58-5	812765-59-6
	812765-60-9	812765-61-0	812765-62-1	812765-63-2	812765-64-3
	812765-65-4	812765-66-5	812765-67-6	812765-68-7	812765-69-8

812765-70-1	812765-71-2	812765-72-3	812765-73-4	812765-74-5
812765-75-6	812765-76-7	812765-77-8	812765-78-9	812765-79-0
812765-80-3	812765-81-4	812765-82-5	812765-83-6	812765-84-7
812765-85-8	812765-86-9	812765-87-0	812765-88-1	812765-89-2
812765-90-5	812765-91-6	812765-92-7	812765-93-8	812765-94-9
812765-95-0	812765-96-1	812765-97-2	812765-98-3	812765-99-4
812766-00-0	812766-01-1	812766-02-2	812766-03-3	812766-04-4
812766-05-5	812766-06-6	812766-07-7	812766-08-8	812766-09-9
812766-10-2	812766-11-3	812766-12-4	812766-13-5	812766-14-6
812766-15-7	812766-16-8	812766-17-9	812766-18-0	812766-19-1
812766-20-4	812766-21-5	812766-22-6	812766-23-7	812766-24-8
812766-25-9	812766-26-0	812766-27-1	812766-28-2	812766-29-3
812766-30-6	812766-31-7	812766-32-8	812766-33-9	812766-34-0
812766-35-1	812766-36-2	812766-37-3	812766-38-4	812766-39-5
812766-40-8	812766-41-9	812766-42-0	812766-43-1	812766-44-2
812766-45-3	812766-46-4	812766-47-5	812766-48-6	812766-49-7
812766-50-0	812766-51-1	812766-52-2	812766-53-3	812766-54-4
812766-55-5	812766-56-6	812766-57-7	812766-58-8	812766-59-9
812766-60-2	812766-61-3	812766-62-4	812766-63-5	812766-64-6
812766-65-7	812766-66-8	812766-67-9	812766-68-0	812766-69-1
812766-70-4	812766-71-5	812766-72-6	812766-73-7	812766-74-8
812766-75-9	812766-76-0	812766-77-1	812766-78-2	812766-79-3
812766-80-6	812766-81-7	812766-82-8	812766-83-9	812766-84-0
812766-85-1	812766-86-2	812766-87-3	812766-88-4	812766-89-5
812766-90-8	812766-91-9	812766-92-0	812766-93-1	812766-94-2
812766-95-3	812766-96-4	812766-97-5	812766-98-6	812766-99-7
812767-00-3	812767-01-4	812767-02-5	812767-03-6	812767-04-7
812767-05-8	812767-06-9	812767-07-0	812767-08-1	812767-09-2
812767-10-5	812767-11-6	812767-12-7	812767-13-8	812767-14-9
812767-15-0	812767-16-1	812767-17-2	812767-18-3	812767-19-4
812767-20-7	812767-21-8	812767-22-9	812767-23-0	812767-24-1
812767-25-2	812767-26-3	812767-27-4	812767-28-5	812767-29-6
812767-30-9	812767-31-0	812767-32-1	812767-33-2	812767-34-3
812767-35-4	812767-36-5	812767-37-6	812767-38-7	812767-39-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812767-40-1	812767-41-2	812767-42-3	812767-43-4	812767-44-5
	812767-45-6	812767-46-7	812767-47-8	812767-48-9	812767-49-0
	812767-50-3	812767-51-4	812767-52-5	812767-53-6	812767-54-7
	812767-55-8	812767-56-9	812767-57-0	812767-58-1	812767-59-2
	812767-60-5	812767-61-6	812767-62-7	812767-63-8	812767-64-9
	812767-65-0	812767-66-1	812767-67-2	812767-68-3	812767-69-4
	812767-70-7	812767-71-8	812767-72-9	812767-73-0	812767-74-1
	812767-75-2	812767-76-3	812767-77-4	812767-78-5	812767-79-6
	812767-80-9	812767-81-0	812767-82-1	812767-83-2	812767-84-3
	812767-85-4	812767-86-5	812767-87-6	812767-88-7	812767-89-8
	812767-90-1	812767-91-2	812767-92-3	812767-93-4	812767-94-5
	812767-95-6	812767-96-7	812767-97-8	812767-98-9	812767-99-0
	812768-00-6	812768-01-7	812768-02-8	812768-03-9	812768-04-0
	812768-05-1	812768-06-2	812768-07-3	812768-08-4	812768-09-5
	812768-10-8	812768-11-9	812768-12-0	812768-13-1	812768-14-2
	812768-15-3	812768-16-4	812768-17-5	812768-18-6	812768-19-7
	812768-20-0	812768-21-1	812768-22-2	812768-23-3	812768-24-4
	812768-25-5	812768-26-6	812768-27-7	812768-28-8	812768-29-9
	812768-30-2	812768-31-3	812768-32-4	812768-33-5	812768-34-6
	812768-35-7	812768-36-8	812768-37-9	812768-38-0	812768-39-1
	812768-40-4	812768-41-5	812768-42-6	812768-43-7	812768-44-8
	812768-45-9	812768-46-0	812768-47-1	812768-48-2	812768-49-3
	812768-50-6	812768-51-7	812768-52-8	812768-53-9	812768-54-0

812768-55-1	812768-56-2	812768-57-3	812768-58-4	812768-59-5
812768-60-8	812768-61-9	812768-62-0	812768-63-1	812768-64-2
812768-65-3	812768-66-4	812768-67-5	812768-68-6	812768-69-7
812768-70-0	812768-71-1	812768-72-2	812768-73-3	812768-74-4
812768-75-5	812768-76-6	812768-77-7	812768-78-8	812768-79-9
812768-80-2	812768-81-3	812768-82-4	812768-83-5	812768-84-6
812768-85-7	812768-86-8	812768-87-9	812768-88-0	812768-89-1
812768-90-4	812768-91-5	812768-92-6	812768-93-7	812768-94-8
812768-95-9	812768-96-0	812768-97-1	812768-98-2	812768-99-3
812769-00-9	812769-01-0	812769-02-1	812769-03-2	812769-04-3
812769-05-4	812769-06-5	812769-07-6	812769-08-7	812769-09-8
812769-10-1	812769-11-2	812769-12-3	812769-13-4	812769-14-5
812769-15-6	812769-16-7	812769-17-8	812769-18-9	812769-19-0
812769-20-3	812769-21-4	812769-22-5	812769-23-6	812769-24-7
812769-25-8	812769-26-9	812769-27-0	812769-28-1	812769-29-2
812769-30-5	812769-31-6	812769-32-7	812769-33-8	812769-34-9
812769-35-0	812769-36-1	812769-37-2	812769-38-3	812769-39-4
812769-40-7	812769-41-8	812769-42-9	812769-43-0	812769-44-1
812769-45-2	812769-46-3	812769-47-4	812769-48-5	812769-49-6
812769-50-9	812769-51-0	812769-52-1	812769-53-2	812769-54-3
812769-55-4	812769-56-5	812769-57-6	812769-58-7	812769-59-8
812769-60-1	812769-61-2	812769-62-3	812769-63-4	812769-64-5
812769-65-6	812769-66-7	812769-67-8	812769-68-9	812769-69-0
812769-70-3	812769-71-4	812769-72-5	812769-73-6	812769-74-7

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812769-75-8	812769-76-9	812769-77-0	812769-78-1	812769-79-2
	812769-80-5	812769-81-6	812769-82-7	812769-83-8	812769-84-9
	812769-85-0	812769-86-1	812769-87-2	812769-88-3	812769-89-4
	812769-90-7	812769-91-8	812769-92-9	812769-93-0	812769-94-1
	812769-95-2	812769-96-3	812769-97-4	812769-98-5	812769-99-6
	812770-00-6	812770-01-7	812770-02-8	812770-03-9	812770-04-0
	812770-05-1	812770-06-2	812770-07-3	812770-08-4	812770-09-5
	812770-10-8	812770-11-9	812770-12-0	812770-13-1	812770-14-2
	812770-15-3	812770-16-4	812770-17-5	812770-18-6	812770-19-7
	812770-20-0	812770-21-1	812770-22-2	812770-23-3	812770-24-4
	812770-25-5	812770-26-6	812770-27-7	812770-28-8	812770-29-9
	812770-30-2	812770-31-3	812770-32-4	812770-33-5	812770-34-6
	812770-35-7	812770-36-8	812770-37-9	812770-38-0	812770-39-1
	812770-40-4	812770-41-5	812770-42-6	812770-43-7	812770-44-8
	812770-45-9	812770-46-0	812770-47-1	812770-48-2	812770-49-3
	812770-50-6	812770-51-7	812770-52-8	812770-53-9	812770-54-0
	812770-55-1	812770-56-2	812770-57-3	812770-58-4	812770-59-5
	812770-60-8	812770-61-9	812770-62-0	812770-63-1	812770-64-2
	812770-65-3	812770-66-4	812770-67-5	812770-68-6	812770-69-7
	812770-70-0	812770-71-1	812770-72-2	812770-73-3	812770-74-4
	812770-75-5	812770-76-6	812770-77-7	812770-78-8	812770-79-9
	812770-80-2	812770-81-3	812770-82-4	812770-83-5	812770-84-6
	812770-85-7	812770-86-8	812770-87-9	812770-88-0	812770-89-1
	812770-90-4	812770-91-5	812770-92-6	812770-93-7	812770-94-8
	812770-95-9	812770-96-0	812770-97-1	812770-98-2	812770-99-3
	812771-00-9	812771-01-0	812771-02-1	812771-03-2	812771-04-3
	812771-05-4	812771-06-5	812771-07-6	812771-08-7	812771-09-8
	812771-10-1	812771-11-2	812771-12-3	812771-13-4	812771-14-5
	812771-15-6	812771-16-7	812771-17-8	812771-18-9	812771-19-0
	812771-20-3	812771-21-4	812771-22-5	812771-23-6	812771-24-7
	812771-25-8	812771-26-9	812771-27-0	812771-28-1	812771-29-2
	812771-30-5	812771-31-6	812771-32-7	812771-33-8	812771-34-9
	812771-35-0	812771-36-1	812771-37-2	812771-38-3	812771-39-4

812771-40-7	812771-41-8	812771-42-9	812771-43-0	812771-44-1
812771-45-2	812771-46-3	812771-47-4	812771-48-5	812771-49-6
812771-50-9	812771-51-0	812771-52-1	812771-53-2	812771-54-3
812771-55-4	812771-56-5	812771-57-6	812771-58-7	812771-59-8
812771-60-1	812771-61-2	812771-62-3	812771-63-4	812771-64-5
812771-65-6	812771-66-7	812771-67-8	812771-68-9	812771-69-0
812771-70-3	812771-71-4	812771-72-5	812771-73-6	812771-74-7
812771-75-8	812771-76-9	812771-77-0	812771-78-1	812771-79-2
812771-80-5	812771-81-6	812771-82-7	812771-83-8	812771-84-9
812771-85-0	812771-86-1	812771-87-2	812771-88-3	812771-89-4
812771-90-7	812771-91-8	812771-92-9	812771-93-0	812771-94-1
812771-95-2	812771-96-3	812771-97-4	812771-98-5	812771-99-6
812772-00-2	812772-01-3	812772-02-4	812772-03-5	812772-04-6
812772-05-7	812772-06-8	812772-07-9	812772-08-0	812772-09-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812772-10-4	812772-11-5	812772-12-6	812772-13-7	812772-14-8
	812772-15-9	812772-16-0	812772-17-1	812772-18-2	812772-19-3
	812772-20-6	812772-21-7	812772-22-8	812772-23-9	812772-24-0
	812772-25-1	812772-26-2	812772-27-3	812772-28-4	812772-29-5
	812772-30-8	812772-31-9	812772-32-0	812772-33-1	812772-34-2
	812772-35-3	812772-36-4	812772-37-5	812772-38-6	812772-39-7
	812772-40-0	812772-41-1	812772-42-2	812772-43-3	812772-44-4
	812772-45-5	812772-46-6	812772-47-7	812772-48-8	812772-49-9
	812772-50-2	812772-51-3	812772-52-4	812772-53-5	812772-54-6
	812772-55-7	812772-56-8	812772-57-9	812772-58-0	812772-59-1
	812772-60-4	812772-61-5	812772-62-6	812772-63-7	812772-64-8
	812772-65-9	812772-66-0	812772-67-1	812772-68-2	812772-69-3
	812772-70-6	812772-71-7	812772-72-8	812772-73-9	812772-74-0
	812772-75-1	812772-76-2	812772-77-3	812772-78-4	812772-79-5
	812772-80-8	812772-81-9	812772-82-0	812772-83-1	812772-84-2
	812772-85-3	812772-86-4	812772-87-5	812772-88-6	812772-89-7
	812772-90-0	812772-91-1	812772-92-2	812772-93-3	812772-94-4
	812772-95-5	812772-96-6	812772-97-7	812772-98-8	812772-99-9
	812773-00-5	812773-01-6	812773-02-7	812773-03-8	812773-04-9
	812773-05-0	812773-06-1	812773-07-2	812773-08-3	812773-09-4
	812773-10-7	812773-11-8	812773-12-9	812773-13-0	812773-14-1
	812773-15-2	812773-16-3	812773-17-4	812773-18-5	812773-19-6
	812773-20-9	812773-21-0	812773-22-1	812773-23-2	812773-24-3
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	812773-35-6	812773-36-7	812773-37-8	812773-38-9	812773-39-0
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	812773-95-8	812773-96-9	812773-97-0	812773-98-1	812773-99-2
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	812774-05-3	812774-06-4	812774-07-5	812774-08-6	812774-09-7
	812774-10-0	812774-11-1	812774-12-2	812774-13-3	812774-14-4
	812774-15-5	812774-16-6	812774-17-7	812774-18-8	812774-19-9
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 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812774-45-1 812774-46-2 812774-47-3 812774-48-4 812774-49-5  
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 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812776-80-0 812776-81-1 812776-82-2 812776-83-3 812776-84-4  
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812776-95-7	812776-96-8	812776-97-9	812776-98-0	812776-99-1
812777-00-7	812777-01-8	812777-02-9	812777-03-0	812777-04-1
812777-05-2	812777-06-3	812777-07-4	812777-08-5	812777-09-6
812777-10-9	812777-11-0	812777-12-1	812777-13-2	812777-14-3
812777-15-4	812777-16-5	812777-17-6	812777-18-7	812777-19-8
812777-20-1	812777-21-2	812777-22-3	812777-23-4	812777-24-5
812777-25-6	812777-26-7	812777-27-8	812777-28-9	812777-29-0
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812777-35-8	812777-36-9	812777-37-0	812777-38-1	812777-39-2
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812777-55-2	812777-56-3	812777-57-4	812777-58-5	812777-59-6
812777-60-9	812777-61-0	812777-62-1	812777-63-2	812777-64-3
812777-65-4	812777-66-5	812777-67-6	812777-68-7	812777-69-8
812777-70-1	812777-71-2	812777-72-3	812777-73-4	812777-74-5
812777-75-6	812777-76-7	812777-77-8	812777-78-9	812777-79-0
812777-80-3	812777-81-4	812777-82-5	812777-83-6	812777-84-7
812777-85-8	812777-86-9	812777-87-0	812777-88-1	812777-89-2
812777-90-5	812777-91-6	812777-92-7	812777-93-8	812777-94-9
812777-95-0	812777-96-1	812777-97-2	812777-98-3	812777-99-4
812778-00-0	812778-01-1	812778-02-2	812778-03-3	812778-04-4
812778-05-5	812778-06-6	812778-07-7	812778-08-8	812778-09-9
812778-10-2	812778-11-3	812778-12-4	812778-13-5	812778-14-6
812778-15-7	812778-16-8	812778-17-9	812778-18-0	812778-19-1
812778-20-4	812778-21-5	812778-22-6	812778-23-7	812778-24-8
812778-25-9	812778-26-0	812778-27-1	812778-28-2	812778-29-3
812778-30-6	812778-31-7	812778-32-8	812778-33-9	812778-34-0
812778-35-1	812778-36-2	812778-37-3	812778-38-4	812778-39-5
812778-40-8	812778-41-9	812778-42-0	812778-43-1	812778-44-2
812778-45-3	812778-46-4	812778-47-5	812778-48-6	812778-49-7
812778-50-0	812778-51-1	812778-52-2	812778-53-3	812778-54-4
812778-55-5	812778-56-6	812778-57-7	812778-58-8	812778-60-2
812778-61-3	812778-62-4	812778-63-5	812778-64-6	812778-65-7
812778-66-8	812778-68-0	812778-69-1	812778-70-4	812778-71-5
812778-72-6	812778-73-7	812778-75-9	812778-76-0	812778-77-1
812778-78-2	812778-79-3	812778-80-6	812778-82-8	812778-83-9
812778-84-0	812778-85-1	812778-86-2	812778-87-3	812778-89-5
812778-90-8	812778-91-9	812778-92-0	812778-93-1	812778-94-2
812778-95-3	812778-96-4	812778-97-5	812778-98-6	812778-99-7
812779-00-3	812779-01-4	812779-02-5	812779-03-6	812779-04-7
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812779-10-5	812779-11-6	812779-12-7	812779-13-8	812779-14-9
812779-15-0	812779-16-1	812779-17-2	812779-18-3	812779-19-4

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812779-20-7	812779-21-8	812779-22-9	812779-23-0	812779-24-1
	812779-25-2	812779-26-3	812779-27-4	812779-28-5	812779-29-6
	812779-30-9	812779-31-0	812779-32-1	812779-33-2	812779-34-3
	812779-35-4	812779-36-5	812779-37-6	812779-38-7	812779-39-8
	812779-40-1	812779-41-2	812779-42-3	812779-43-4	812779-44-5
	812779-45-6	812779-46-7	812779-47-8	812779-48-9	812779-49-0
	812779-50-3	812779-51-4	812779-52-5	812779-53-6	812779-54-7
	812779-55-8	812779-56-9	812779-57-0	812779-58-1	812779-59-2
	812779-60-5	812779-61-6	812779-62-7	812779-63-8	812779-64-9
	812779-65-0	812779-66-1	812779-67-2	812779-68-3	812779-69-4
	812779-70-7	812779-71-8	812779-72-9	812779-73-0	812779-74-1
	812779-75-2	812779-76-3	812779-77-4	812779-78-5	812779-79-6

812779-80-9	812779-81-0	812779-82-1	812779-83-2	812779-84-3
812779-85-4	812779-86-5	812779-87-6	812779-88-7	812779-89-8
812779-90-1	812779-91-2	812779-92-3	812779-93-4	812779-94-5
812779-95-6	812779-96-7	812779-97-8	812779-98-9	812779-99-0
812780-00-0	812780-01-1	812780-02-2	812780-03-3	812780-04-4
812780-05-5	812780-06-6	812780-07-7	812780-08-8	812780-09-9
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812780-40-8	812780-41-9	812780-42-0	812780-43-1	812780-44-2
812780-45-3	812780-46-4	812780-47-5	812780-48-6	812780-49-7
812780-50-0	812780-51-1	812780-52-2	812780-53-3	812780-54-4
812780-55-5	812780-56-6	812780-57-7	812780-58-8	812780-59-9
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812780-70-4	812780-71-5	812780-72-6	812780-73-7	812780-74-8
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812780-80-6	812780-81-7	812780-82-8	812780-83-9	812780-84-0
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812780-90-8	812780-91-9	812780-92-0	812780-93-1	812780-94-2
812780-95-3	812780-96-4	812780-97-5	812780-98-6	812780-99-7
812781-00-3	812781-01-4	812781-02-5	812781-03-6	812781-04-7
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812781-10-5	812781-11-6	812781-12-7	812781-13-8	812781-14-9
812781-15-0	812781-16-1	812781-17-2	812781-18-3	812781-19-4
812781-20-7	812781-21-8	812781-22-9	812781-23-0	812781-24-1
812781-25-2	812781-26-3	812781-27-4	812781-28-5	812781-29-6
812781-30-9	812781-31-0	812781-32-1	812781-33-2	812781-34-3
812781-35-4	812781-36-5	812781-37-6	812781-38-7	812781-39-8
812781-40-1	812781-41-2	812781-42-3	812781-43-4	812781-44-5
812781-45-6	812781-46-7	812781-47-8	812781-48-9	812781-49-0
812781-50-3	812781-51-4	812781-52-5	812781-53-6	812781-54-7

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812781-55-8	812781-56-9	812781-57-0	812781-58-1	812781-59-2
	812781-60-5	812781-61-6	812781-62-7	812781-63-8	812781-64-9
	812781-65-0	812781-66-1	812781-67-2	812781-68-3	812781-69-4
	812781-70-7	812781-71-8	812781-72-9	812781-73-0	812781-74-1
	812781-75-2	812781-76-3	812781-77-4	812781-78-5	812781-79-6
	812781-80-9	812781-81-0	812781-82-1	812781-83-2	812781-84-3
	812781-85-4	812781-86-5	812781-87-6	812781-88-7	812781-89-8
	812781-90-1	812781-91-2	812781-92-3	812781-93-4	812781-94-5
	812781-95-6	812781-96-7	812781-97-8	812781-98-9	812781-99-0
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	812782-05-1	812782-06-2	812782-07-3	812782-08-4	812782-09-5
	812782-10-8	812782-11-9	812782-12-0	812782-13-1	812782-14-2
	812782-15-3	812782-16-4	812782-17-5	812782-18-6	812782-19-7
	812782-20-0	812782-21-1	812782-22-2	812782-23-3	812782-24-4
	812782-25-5	812782-26-6	812782-27-7	812782-28-8	812782-29-9
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	812782-35-7	812782-36-8	812782-37-9	812782-38-0	812782-39-1
	812782-40-4	812782-41-5	812782-42-6	812782-43-7	812782-44-8
	812782-45-9	812782-46-0	812782-47-1	812782-48-2	812782-49-3
	812782-50-6	812782-51-7	812782-52-8	812782-53-9	812782-54-0
	812782-55-1	812782-56-2	812782-57-3	812782-58-4	812782-59-5
	812782-60-8	812782-61-9	812782-62-0	812782-63-1	812782-64-2

812782-65-3	812782-66-4	812782-67-5	812782-68-6	812782-69-7
812782-70-0	812782-71-1	812782-72-2	812782-73-3	812782-74-4
812782-75-5	812782-76-6	812782-77-7	812782-78-8	812782-79-9
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812782-85-7	812782-86-8	812782-87-9	812782-88-0	812782-89-1
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812783-15-6	812783-16-7	812783-17-8	812783-18-9	812783-19-0
812783-20-3	812783-21-4	812783-22-5	812783-23-6	812783-24-7
812783-25-8	812783-26-9	812783-27-0	812783-28-1	812783-29-2
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812783-70-3	812783-71-4	812783-72-5	812783-73-6	812783-74-7
812783-75-8	812783-76-9	812783-77-0	812783-78-1	812783-79-2
812783-80-5	812783-81-6	812783-82-7	812783-83-8	812783-84-9
812783-85-0	812783-86-1	812783-87-2	812783-88-3	812783-89-4

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812783-90-7	812783-91-8	812783-92-9	812783-93-0	812783-94-1
	812783-95-2	812783-96-3	812783-97-4	812783-98-5	812783-99-6
	812784-00-2	812784-01-3	812784-02-4	812784-03-5	812784-04-6
	812784-05-7	812784-06-8	812784-07-9	812784-08-0	812784-09-1
	812784-10-4	812784-11-5	812784-12-6	812784-13-7	812784-14-8
	812784-15-9	812784-16-0	812784-17-1	812784-18-2	812784-19-3
	812784-20-6	812784-21-7	812784-22-8	812784-23-9	812784-24-0
	812784-25-1	812784-26-2	812784-27-3	812784-28-4	812784-29-5
	812784-30-8	812784-31-9	812784-32-0	812784-33-1	812784-34-2
	812784-35-3	812784-36-4	812784-37-5	812784-38-6	812784-39-7
	812784-40-0	812784-41-1	812784-42-2	812784-43-3	812784-44-4
	812784-45-5	812784-46-6	812784-47-7	812784-48-8	812784-49-9
	812784-50-2	812784-51-3	812784-52-4	812784-53-5	812784-54-6
	812784-55-7	812784-56-8	812784-57-9	812784-58-0	812784-59-1
	812784-60-4	812784-61-5	812784-62-6	812784-63-7	812784-64-8
	812784-65-9	812784-66-0	812784-67-1	812784-68-2	812784-69-3
	812784-70-6	812784-71-7	812784-72-8	812784-73-9	812784-74-0
	812784-75-1	812784-76-2	812784-77-3	812784-78-4	812784-79-5
	812784-80-8	812784-81-9	812784-82-0	812784-83-1	812784-84-2
	812784-85-3	812784-86-4	812784-87-5	812784-88-6	812784-89-7
	812784-90-0	812784-91-1	812784-92-2	812784-93-3	812784-94-4
	812784-95-5	812784-96-6	812784-97-7	812784-98-8	812784-99-9
	812785-00-5	812785-01-6	812785-02-7	812785-03-8	812785-04-9
	812785-05-0	812785-06-1	812785-07-2	812785-08-3	812785-09-4
	812785-10-7	812785-11-8	812785-12-9	812785-13-0	812785-14-1
	812785-15-2	812785-16-3	812785-17-4	812785-18-5	812785-19-6
	812785-20-9	812785-21-0	812785-22-1	812785-23-2	812785-24-3
	812785-25-4	812785-26-5	812785-27-6	812785-28-7	812785-29-8
	812785-30-1	812785-31-2	812785-32-3	812785-33-4	812785-34-5
	812785-35-6	812785-36-7	812785-37-8	812785-38-9	812785-39-0
	812785-40-3	812785-41-4	812785-42-5	812785-43-6	812785-44-7
	812785-45-8	812785-46-9	812785-47-0	812785-48-1	812785-49-2

812785-50-5	812785-51-6	812785-52-7	812785-53-8	812785-54-9
812785-55-0	812785-56-1	812785-57-2	812785-58-3	812785-59-4
812785-60-7	812785-61-8	812785-62-9	812785-63-0	812785-64-1
812785-65-2	812785-66-3	812785-67-4	812785-68-5	812785-69-6
812785-70-9	812785-71-0	812785-72-1	812785-73-2	812785-74-3
812785-75-4	812785-76-5	812785-77-6	812785-78-7	812785-79-8
812785-80-1	812785-81-2	812785-82-3	812785-83-4	812785-84-5
812785-85-6	812785-86-7	812785-87-8	812785-88-9	812785-89-0
812785-90-3	812785-91-4	812785-92-5	812785-93-6	812785-94-7
812785-95-8	812785-96-9	812785-97-0	812785-98-1	812785-99-2
812786-00-8	812786-01-9	812786-02-0	812786-03-1	812786-04-2
812786-05-3	812786-06-4	812786-07-5	812786-08-6	812786-09-7
812786-10-0	812786-11-1	812786-12-2	812786-13-3	812786-14-4
812786-15-5	812786-16-6	812786-17-7	812786-18-8	812786-19-9
812786-20-2	812786-21-3	812786-22-4	812786-23-5	812786-24-6

RL; BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812786-25-7	812786-26-8	812786-27-9	812786-28-0	812786-29-1
	812786-30-4	812786-31-5	812786-32-6	812786-33-7	812786-34-8
	812786-35-9	812786-36-0	812786-37-1	812786-38-2	812786-39-3
	812786-40-6	812786-41-7	812786-42-8	812786-43-9	812786-44-0
	812786-45-1	812786-46-2	812786-47-3	812786-48-4	812786-49-5
	812786-50-8	812786-51-9	812786-52-0	812786-53-1	812786-54-2
	812786-55-3	812786-56-4	812786-57-5	812786-58-6	812786-59-7
	812786-60-0	812786-61-1	812786-62-2	812786-63-3	812786-64-4
	812786-65-5	812786-66-6	812786-67-7	812786-68-8	812786-69-9
	812786-70-2	812786-71-3	812786-72-4	812786-73-5	812786-74-6
	812786-75-7	812786-76-8	812786-77-9	812786-78-0	812786-79-1
	812786-80-4	812786-81-5	812786-82-6	812786-83-7	812786-84-8
	812786-85-9	812786-86-0	812786-87-1	812786-88-2	812786-89-3
	812786-90-6	812786-91-7	812786-92-8	812786-93-9	812786-94-0
	812786-95-1	812786-96-2	812786-97-3	812786-98-4	812786-99-5
	812787-00-1	812787-01-2	812787-02-3	812787-03-4	812787-04-5
	812787-05-6	812787-06-7	812787-07-8	812787-08-9	812787-09-0
	812787-10-3	812787-11-4	812787-12-5	812787-13-6	812787-14-7
	812787-15-8	812787-16-9	812787-17-0	812787-18-1	812787-19-2
	812787-20-5	812787-21-6	812787-22-7	812787-23-8	812787-24-9
	812787-25-0	812787-26-1	812787-27-2	812787-28-3	812787-29-4
	812787-30-7	812787-31-8	812787-32-9	812787-33-0	812787-34-1
	812787-35-2	812787-36-3	812787-37-4	812787-38-5	812787-39-6
	812787-40-9	812787-41-0	812787-42-1	812787-43-2	812787-44-3
	812787-45-4	812787-46-5	812787-47-6	812787-48-7	812787-49-8
	812787-50-1	812787-51-2	812787-52-3	812787-53-4	812787-54-5
	812787-55-6	812787-56-7	812787-57-8	812787-58-9	812787-59-0
	812787-60-3	812787-61-4	812787-62-5	812787-63-6	812787-64-7
	812787-65-8	812787-66-9	812787-67-0	812787-68-1	812787-69-2
	812787-70-5	812787-71-6	812787-72-7	812787-73-8	812787-74-9
	812787-75-0	812787-76-1	812787-77-2	812787-78-3	812787-79-4
	812787-80-7	812787-81-8	812787-82-9	812787-83-0	812787-84-1
	812787-85-2	812787-86-3	812787-87-4	812787-88-5	812787-89-6
	812787-90-9	812787-91-0	812787-92-1	812787-93-2	812787-94-3
	812787-95-4	812787-96-5	812787-97-6	812787-98-7	812787-99-8
	812788-00-4	812788-01-5	812788-02-6	812788-03-7	812788-04-8
	812788-05-9	812788-06-0	812788-07-1	812788-08-2	812788-09-3
	812788-10-6	812788-11-7	812788-13-9	812788-14-0	812788-15-1
	812788-16-2	812788-17-3	812788-18-4	812788-19-5	812788-20-8
	812788-21-9	812788-22-0	812788-23-1	812788-24-2	812788-25-3
	812788-26-4	812788-27-5	812788-28-6	812788-29-7	812788-30-0
	812788-31-1	812788-32-2	812788-33-3	812788-34-4	812788-35-5

812788-36-6 812788-37-7 812788-39-9 812788-40-2 812788-41-3  
 812788-42-4 812788-43-5 812788-44-6 812788-46-8 812788-47-9  
 812788-48-0 812788-49-1 812788-50-4 812788-51-5 812788-52-6  
 812788-53-7 812788-54-8 812788-55-9 812788-56-0 812788-57-1  
 812788-58-2 812788-59-3 812788-60-6 812788-61-7 812788-62-8  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812788-63-9 812788-64-0 812788-66-2 812788-67-3 812788-68-4  
 812788-69-5 812788-70-8 812788-71-9 812788-72-0 812788-73-1  
 812788-75-3 812788-76-4 812788-77-5 812788-78-6 812788-79-7  
 812788-80-0 812788-81-1 812788-82-2 812788-83-3 812788-84-4  
 812788-85-5 812788-86-6 812788-87-7 812788-88-8 812788-89-9  
 812788-90-2 812788-91-3 812788-92-4 812788-93-5 812788-94-6  
 812788-95-7 812788-96-8 812788-97-9 812788-98-0 812788-99-1  
 812789-00-7 812789-01-8 812789-02-9 812789-03-0 812789-04-1  
 812789-05-2 812789-06-3 812789-07-4 812789-08-5 812789-09-6  
 812789-10-9 812789-11-0 812789-12-1 812789-13-2 812789-14-3  
 812789-15-4 812789-16-5 812789-17-6 812789-18-7 812789-19-8  
 812789-20-1 812789-21-2 812789-22-3 812789-23-4 812789-24-5  
 812789-25-6 812789-26-7 812789-27-8 812789-28-9 812789-29-0  
 812789-30-3 812789-31-4 812789-32-5 812789-33-6 812789-34-7  
 812789-35-8 812789-36-9 812789-37-0 812789-38-1 812789-39-2  
 812789-40-5 812789-41-6 812789-42-7 812789-43-8 812789-44-9  
 812789-45-0 812789-46-1 812789-47-2 812789-48-3 812789-49-4  
 812789-50-7 812789-51-8 812789-52-9 812789-53-0 812789-54-1  
 812789-55-2 812789-56-3 812789-57-4 812789-58-5 812789-59-6  
 812789-60-9 812789-61-0 812789-62-1 812789-63-2 812789-64-3  
 812789-65-4 812789-66-5 812789-67-6 812789-68-7 812789-69-8  
 812789-70-1 812789-71-2 812789-72-3 812789-73-4 812789-74-5  
 812789-75-6 812789-76-7 812789-77-8 812789-78-9 812789-79-0  
 812789-80-3 812789-81-4 812789-82-5 812789-83-6 812789-84-7  
 812789-85-8 812789-86-9 812789-87-0 812789-88-1 812789-89-2  
 812789-90-5 812789-91-6 812789-92-7 812789-93-8 812789-94-9  
 812789-95-0 812789-96-1 812789-97-2 812789-98-3 812789-99-4  
 812790-00-4 812790-01-5 812790-02-6 812790-03-7 812790-04-8  
 812790-05-9 812790-06-0 812790-07-1 812790-08-2 812790-09-3  
 812790-10-6 812790-11-7 812790-12-8 812790-13-9 812790-14-0  
 812790-15-1 812790-16-2 812790-17-3 812790-18-4 812790-19-5  
 812790-20-8 812790-21-9 812790-22-0 812790-23-1 812790-24-2  
 812790-25-3 812790-26-4 812790-27-5 812790-28-6 812790-29-7  
 812790-30-0 812790-31-1 812790-32-2 812790-33-3 812790-34-4  
 812790-35-5 812790-36-6 812790-37-7 812790-38-8 812790-39-9  
 812790-40-2 812790-41-3 812790-42-4 812790-43-5 812790-44-6  
 812790-45-7 812790-46-8 812790-47-9 812790-48-0 812790-49-1  
 812790-50-4 812790-51-5 812790-52-6 812790-53-7 812790-54-8  
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 812790-60-6 812790-61-7 812790-62-8 812790-63-9 812790-64-0  
 812790-65-1 812790-66-2 812790-67-3 812790-68-4 812790-69-5  
 812790-70-8 812790-71-9 812790-72-0 812790-73-1 812790-74-2  
 812790-75-3 812790-76-4 812790-77-5 812790-78-6 812790-79-7  
 812790-80-0 812790-81-1 812790-82-2 812790-83-3 812790-84-4  
 812790-85-5 812790-86-6 812790-87-7 812790-88-8 812790-89-9  
 812790-90-2 812790-91-3 812790-92-4 812790-93-5 812790-94-6  
 812790-95-7 812790-96-8 812790-97-9 812790-98-0 812790-99-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812791-00-7 812791-01-8 812791-02-9 812791-03-0 812791-04-1

812791-05-2	812791-06-3	812791-07-4	812791-08-5	812791-09-6
812791-10-9	812791-11-0	812791-12-1	812791-13-2	812791-14-3
812791-15-4	812791-16-5	812791-17-6	812791-18-7	812791-19-8
812791-20-1	812791-21-2	812791-22-3	812791-23-4	812791-24-5
812791-25-6	812791-26-7	812791-27-8	812791-28-9	812791-29-0
812791-30-3	812791-31-4	812791-32-5	812791-33-6	812791-34-7
812791-35-8	812791-36-9	812791-37-0	812791-38-1	812791-39-2
812791-40-5	812791-41-6	812791-42-7	812791-43-8	812791-44-9
812791-45-0	812791-46-1	812791-47-2	812791-48-3	812791-49-4
812791-50-7	812791-51-8	812791-52-9	812791-53-0	812791-54-1
812791-55-2	812791-56-3	812791-57-4	812791-58-5	812791-59-6
812791-60-9	812791-61-0	812791-62-1	812791-63-2	812791-64-3
812791-65-4	812791-66-5	812791-67-6	812791-68-7	812791-69-8
812791-70-1	812791-71-2	812791-72-3	812791-73-4	812791-74-5
812791-75-6	812791-76-7	812791-77-8	812791-78-9	812791-79-0
812791-80-3	812791-81-4	812791-82-5	812791-83-6	812791-84-7
812791-85-8	812791-86-9	812791-87-0	812791-88-1	812791-89-2
812791-90-5	812791-91-6	812791-92-7	812791-93-8	812791-94-9
812791-95-0	812791-96-1	812791-97-2	812791-98-3	812791-99-4
812792-00-0	812792-01-1	812792-02-2	812792-03-3	812792-04-4
812792-05-5	812792-06-6	812792-07-7	812792-08-8	812792-09-9
812792-10-2	812792-11-3	812792-12-4	812792-13-5	812792-14-6
812792-15-7	812792-16-8	812792-17-9	812792-18-0	812792-19-1
812792-20-4	812792-21-5	812792-22-6	812792-23-7	812792-24-8
812792-25-9	812792-26-0	812792-27-1	812792-28-2	812792-29-3
812792-30-6	812792-31-7	812792-32-8	812792-33-9	812792-34-0
812792-35-1	812792-36-2	812792-37-3	812792-38-4	812792-39-5
812792-40-8	812792-41-9	812792-42-0	812792-43-1	812792-44-2
812792-45-3	812792-46-4	812792-47-5	812792-48-6	812792-49-7
812792-50-0	812792-51-1	812792-52-2	812792-53-3	812792-54-4
812792-55-5	812792-56-6	812792-57-7	812792-58-8	812792-59-9
812792-60-2	812792-61-3	812792-62-4	812792-63-5	812792-64-6
812792-65-7	812792-66-8	812792-67-9	812792-68-0	812792-69-1
812792-70-4	812792-71-5	812792-72-6	812792-73-7	812792-74-8
812792-75-9	812792-76-0	812792-77-1	812792-78-2	812792-79-3
812792-80-6	812792-81-7	812792-82-8	812792-83-9	812792-84-0
812792-85-1	812792-86-2	812792-87-3	812792-88-4	812792-89-5
812792-90-8	812792-91-9	812792-92-0	812792-93-1	812792-94-2
812792-95-3	812792-96-4	812792-97-5	812792-98-6	812792-99-7
812793-00-3	812793-01-4	812793-02-5	812793-03-6	812793-04-7
812793-05-8	812793-06-9	812793-07-0	812793-08-1	812793-09-2
812793-10-5	812793-11-6	812793-12-7	812793-13-8	812793-14-9
812793-15-0	812793-16-1	812793-17-2	812793-18-3	812793-19-4
812793-20-7	812793-21-8	812793-22-9	812793-23-0	812793-24-1
812793-25-2	812793-26-3	812793-27-4	812793-28-5	812793-29-6
812793-30-9	812793-31-0	812793-32-1	812793-33-2	812793-34-3

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	812793-35-4	812793-36-5	812793-37-6	812793-38-7	812793-39-8
	812793-40-1	812793-41-2	812793-42-3	812793-43-4	812793-44-5
	812793-45-6	812793-46-7	812793-47-8	812793-48-9	812793-49-0
	812793-50-3	812793-51-4	812793-52-5	812793-53-6	812793-54-7
	812793-55-8	812793-56-9	812793-57-0	812793-58-1	812793-59-2
	812793-60-5	812793-61-6	812793-62-7	812793-63-8	812793-64-9
	812793-65-0	812793-66-1	812793-67-2	812793-68-3	812793-69-4
	812793-70-7	812793-71-8	812793-72-9	812793-73-0	812793-74-1
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812794-35-7	812794-36-8	812794-37-9	812794-38-0	812794-39-1
812794-40-4	812794-41-5	812794-42-6	812794-43-7	812794-44-8
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812795-50-9	812795-51-0	812795-52-1	812795-53-2	812795-54-3
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 812800-40-1 812800-41-2 812800-42-3 812800-43-4 812800-44-5  
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 9005-53-2P, Lignin, preparation 11078-30-1P, Galactomannan  
 RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 7723-14-0, Phosphorus, biological studies 7727-37-9, Nitrogen, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (improved use and/or uptake of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

L34 ANSWER 9 OF 169 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:5204 HCAPLUS

DN 142:69949

ED Entered STN: 05 Jan 2005

TI Nucleic acid molecules and encoded proteins associated with maize and their uses for plant improvement

IN La Rosa, Thomas J.; Zhou, Yihua; Kovalic, David; Cao, Yongwei

PA USA

SO U. S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DT Patent

LA English

IC C07H021-04; A01H001-00; C12N015-82; C12N005-04

NCL 435069100; 435419000; 435468000; 530370000; 536023600; 800278000

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 6, 11

FAN. CNT 76

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004214272	A1	20041028	US 2003-425115	20030428 <--
US 2004214272	A1	20041028	US 2003-425115	20030428 <--
PRAI US 2003-425115	A	20030428	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 2004214272	IC	C07H021-04IC	A01H001-00IC	C12N015-82IC
		C12N005-04		
	NCL	435069100; 435419000; 435468000; 530370000; 536023600;		
		800278000		

AB Recombinant polynucleotides useful for improvement of plants are provided. In particular, a total of 184,663 cDNA sequences are provided from cDNA libraries generated from Zea mays (corn). The polypeptides encoded by these polynucleotide sequences are also provided. The open reading frame in each polynucleotide sequence is identified by a combination of predictive and homol. based methods. Functions of polypeptides are determined using a hierarchical classification tool (FunCAT) and five public classification schemes (GO\_BP, GO\_CC, GO\_MF, KEGG, and EC) and one internal Monsanto classification scheme (POI). The disclosed recombinant polynucleotides and polypeptides find use in production of transgenic plants to produce plants having improved properties. [This abstract record is one of 74 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints].

ST plant protein cDNA sequence transformation; corn cDNA sequence plant transformation

IT Stress, plant  
(cold, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant  
(heat, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Recombination, genetic  
(homologous, improved rate of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Cell cycle  
(improved growth rate by manipulation of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Proteins  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
(improved production of seed; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Growth regulators, plant  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Fats and Glyceridic oils, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Pathogen  
(improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Carbohydrates, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(improved use and/or uptake of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Disease resistance, plant  
 Growth and development, plant  
 Herbicide resistance  
 Photosynthesis, biological  
 (improvement of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Embryophyta  
 Protein sequences  
 Transformation, genetic  
 Zea mays  
 cDNA sequences  
 (nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Proteins  
 cDNA  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Transcription factors  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant  
 (osmotic, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant  
 (water deficiency, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

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 811920-63-5 811920-64-6 811920-65-7 811920-66-8 811920-67-9

811920-68-0	811920-69-1	811920-70-4	811920-71-5	811920-72-6
811920-73-7	811920-74-8	811920-75-9	811920-76-0	811920-77-1
811920-78-2	811920-79-3	811920-80-6	811920-81-7	811920-82-8
811920-83-9	811920-84-0	811920-85-1	811920-86-2	811920-87-3
811920-88-4	811920-89-5	811920-90-8	811920-91-9	811920-92-0
811920-93-1	811920-94-2	811920-95-3	811920-96-4	811920-97-5
811920-98-6	811920-99-7	811921-00-3	811921-01-4	811921-02-5
811921-03-6	811921-04-7	811921-05-8	811921-06-9	811921-07-0
811921-08-1	811921-09-2	811921-10-5	811921-11-6	811921-12-7
811921-13-8	811921-14-9	811921-15-0	811921-16-1	811921-17-2
811921-18-3	811921-19-4	811921-20-7	811921-21-8	811921-22-9
811921-23-0	811921-24-1	811921-25-2	811921-26-3	811921-27-4
811921-28-5	811921-29-6	811921-30-9	811921-31-0	811921-32-1
811921-33-2	811921-34-3	811921-35-4	811921-36-5	811921-37-6
811921-38-7	811921-39-8	811921-40-1	811921-41-2	811921-42-3
811921-43-4	811921-44-5	811921-45-6	811921-46-7	811921-47-8
811921-48-9	811921-49-0	811921-50-3	811921-51-4	811921-52-5
811921-53-6	811921-54-7	811921-55-8	811921-56-9	811921-57-0
811921-58-1	811921-59-2	811921-60-5	811921-61-6	811921-62-7
811921-63-8	811921-64-9			

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811921-65-0	811921-66-1	811921-67-2	811921-68-3	811921-69-4
	811921-70-7	811921-71-8	811921-72-9	811921-73-0	811921-74-1
	811921-75-2	811921-76-3	811921-77-4	811921-78-5	811921-79-6
	811921-80-9	811921-81-0	811921-82-1	811921-83-2	811921-84-3
	811921-85-4	811921-86-5	811921-87-6	811921-88-7	811921-89-8
	811921-90-1	811921-91-2	811921-92-3	811921-93-4	811921-94-5
	811921-95-6	811921-96-7	811921-97-8	811921-98-9	811921-99-0
	811922-00-6	811922-01-7	811922-02-8	811922-03-9	811922-04-0
	811922-05-1	811922-06-2	811922-07-3	811922-08-4	811922-09-5
	811922-10-8	811922-11-9	811922-12-0	811922-13-1	811922-14-2
	811922-15-3	811922-16-4	811922-17-5	811922-18-6	811922-19-7
	811922-20-0	811922-21-1	811922-22-2	811922-23-3	811922-24-4
	811922-25-5	811922-26-6	811922-27-7	811922-28-8	811922-29-9
	811922-30-2	811922-31-3	811922-32-4	811922-33-5	811922-34-6
	811922-35-7	811922-36-8	811922-37-9	811922-38-0	811922-39-1
	811922-40-4	811922-41-5	811922-42-6	811922-43-7	811922-44-8
	811922-45-9	811922-46-0	811922-47-1	811922-48-2	811922-49-3
	811922-50-6	811922-51-7	811922-52-8	811922-53-9	811922-54-0
	811922-55-1	811922-56-2	811922-57-3	811922-58-4	811922-59-5
	811922-60-8	811922-61-9	811922-62-0	811922-63-1	811922-64-2
	811922-65-3	811922-66-4	811922-67-5	811922-68-6	811922-69-7
	811922-70-0	811922-71-1	811922-72-2	811922-73-3	811922-74-4
	811922-75-5	811922-76-6	811922-77-7	811922-78-8	811922-79-9
	811922-80-2	811922-81-3	811922-82-4	811922-83-5	811922-84-6
	811922-85-7	811922-86-8	811922-87-9	811922-88-0	811922-89-1
	811922-90-4	811922-91-5	811922-92-6	811922-93-7	811922-94-8
	811922-95-9	811922-96-0	811922-97-1	811922-98-2	811922-99-3
	811923-00-9	811923-01-0	811923-02-1	811923-03-2	811923-04-3
	811923-05-4	811923-06-5	811923-07-6	811923-08-7	811923-09-8
	811923-10-1	811923-11-2	811923-12-3	811923-13-4	811923-14-5
	811923-15-6	811923-16-7	811923-17-8	811923-18-9	811923-19-0
	811923-20-3	811923-21-4	811923-22-5	811923-23-6	811923-24-7
	811923-25-8	811923-26-9	811923-27-0	811923-28-1	811923-29-2
	811923-30-5	811923-31-6	811923-32-7	811923-33-8	811923-34-9
	811923-35-0	811923-36-1	811923-37-2	811923-38-3	811923-39-4
	811923-40-7	811923-41-8	811923-42-9	811923-43-0	811923-44-1
	811923-45-2	811923-46-3	811923-47-4	811923-48-5	811923-49-6

811923-50-9 811923-51-0 811923-52-1 811923-53-2 811923-54-3  
 811923-55-4 811923-56-5 811923-57-6 811923-58-7 811923-59-8  
 811923-60-1 811923-61-2 811923-62-3 811923-63-4 811923-64-5  
 811923-65-6 811923-66-7 811923-67-8 811923-68-9 811923-69-0  
 811923-70-3 811923-71-4 811923-72-5 811923-73-6 811923-74-7  
 811923-75-8 811923-76-9 811923-77-0 811923-78-1 811923-79-2  
 811923-80-5 811923-81-6 811923-82-7 811923-83-8 811923-84-9  
 811923-85-0 811923-86-1 811923-87-2 811923-88-3 811923-89-4  
 811923-90-7 811923-91-8 811923-92-9 811923-93-0 811923-94-1  
 811923-95-2 811923-96-3 811923-97-4 811923-98-5 811923-99-6

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811924-00-2	811924-01-3	811924-02-4	811924-03-5	811924-04-6
	811924-05-7	811924-06-8	811924-07-9	811924-08-0	811924-09-1
	811924-10-4	811924-11-5	811924-12-6	811924-13-7	811924-14-8
	811924-15-9	811924-16-0	811924-17-1	811924-18-2	811924-19-3
	811924-20-6	811924-21-7	811924-22-8	811924-23-9	811924-24-0
	811924-25-1	811924-26-2	811924-27-3	811924-28-4	811924-29-5
	811924-30-8	811924-31-9	811924-32-0	811924-33-1	811924-34-2
	811924-35-3	811924-36-4	811924-37-5	811924-38-6	811924-39-7
	811924-40-0	811924-41-1	811924-42-2	811924-43-3	811924-44-4
	811924-45-5	811924-46-6	811924-47-7	811924-48-8	811924-49-9
	811924-50-2	811924-51-3	811924-52-4	811924-53-5	811924-54-6
	811924-55-7	811924-56-8	811924-57-9	811924-58-0	811924-59-1
	811924-60-4	811924-61-5	811924-62-6	811924-63-7	811924-64-8
	811924-65-9	811924-66-0	811924-67-1	811924-68-2	811924-69-3
	811924-70-6	811924-71-7	811924-72-8	811924-73-9	811924-74-0
	811924-75-1	811924-76-2	811924-77-3	811924-78-4	811924-79-5
	811924-80-8	811924-81-9	811924-82-0	811924-83-1	811924-84-2
	811924-85-3	811924-86-4	811924-87-5	811924-88-6	811924-89-7
	811924-90-0	811924-91-1	811924-92-2	811924-93-3	811924-94-4
	811924-95-5	811924-96-6	811924-97-7	811924-98-8	811924-99-9
	811925-00-5	811925-01-6	811925-02-7	811925-03-8	811925-04-9
	811925-05-0	811925-06-1	811925-07-2	811925-08-3	811925-09-4
	811925-10-7	811925-11-8	811925-12-9	811925-13-0	811925-14-1
	811925-15-2	811925-16-3	811925-17-4	811925-18-5	811925-19-6
	811925-20-9	811925-21-0	811925-22-1	811925-23-2	811925-24-3
	811925-25-4	811925-26-5	811925-27-6	811925-28-7	811925-29-8
	811925-30-1	811925-31-2	811925-32-3	811925-33-4	811925-34-5
	811925-35-6	811925-36-7	811925-37-8	811925-38-9	811925-39-0
	811925-40-3	811925-41-4	811925-42-5	811925-43-6	811925-44-7
	811925-45-8	811925-46-9	811925-47-0	811925-48-1	811925-49-2
	811925-50-5	811925-51-6	811925-52-7	811925-53-8	811925-54-9
	811925-55-0	811925-56-1	811925-57-2	811925-58-3	811925-59-4
	811925-60-7	811925-61-8	811925-62-9	811925-63-0	811925-64-1
	811925-65-2	811925-66-3	811925-67-4	811925-68-5	811925-69-6
	811925-70-9	811925-71-0	811925-72-1	811925-73-2	811925-74-3
	811925-75-4	811925-76-5	811925-77-6	811925-78-7	811925-79-8
	811925-80-1	811925-81-2	811925-82-3	811925-83-4	811925-84-5
	811925-85-6	811925-86-7	811925-87-8	811925-88-9	811925-89-0
	811925-90-3	811925-91-4	811925-92-5	811925-93-6	811925-94-7
	811925-95-8	811925-96-9	811925-97-0	811925-98-1	811925-99-2
	811926-00-8	811926-01-9	811926-02-0	811926-03-1	811926-04-2
	811926-05-3	811926-06-4	811926-07-5	811926-08-6	811926-09-7
	811926-10-0	811926-11-1	811926-12-2	811926-13-3	811926-14-4
	811926-15-5	811926-16-6	811926-17-7	811926-18-8	811926-19-9
	811926-20-2	811926-21-3	811926-22-4	811926-23-5	811926-24-6
	811926-25-7	811926-26-8	811926-27-9	811926-28-0	811926-29-1
	811926-30-4	811926-31-5	811926-32-6	811926-33-7	811926-34-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811926-35-9	811926-36-0	811926-37-1	811926-38-2	811926-39-3
	811926-40-6	811926-41-7	811926-42-8	811926-43-9	811926-44-0
	811926-45-1	811926-46-2	811926-47-3	811926-48-4	811926-49-5
	811926-50-8	811926-51-9	811926-52-0	811926-53-1	811926-54-2
	811926-55-3	811926-56-4	811926-57-5	811926-58-6	811926-59-7
	811926-60-0	811926-61-1	811926-62-2	811926-63-3	811926-64-4
	811926-65-5	811926-66-6	811926-67-7	811926-68-8	811926-69-9
	811926-70-2	811926-71-3	811926-72-4	811926-73-5	811926-74-6
	811926-75-7	811926-76-8	811926-77-9	811926-78-0	811926-79-1
	811926-80-4	811926-81-5	811926-82-6	811926-83-7	811926-84-8
	811926-85-9	811926-86-0	811926-87-1	811926-88-2	811926-89-3
	811926-90-6	811926-91-7	811926-92-8	811926-93-9	811926-94-0
	811926-95-1	811926-96-2	811926-97-3	811926-98-4	811926-99-5
	811927-00-1	811927-01-2	811927-02-3	811927-03-4	811927-04-5
	811927-05-6	811927-06-7	811927-07-8	811927-08-9	811927-09-0
	811927-10-3	811927-11-4	811927-12-5	811927-13-6	811927-14-7
	811927-15-8	811927-16-9	811927-17-0	811927-18-1	811927-19-2
	811927-20-5	811927-21-6	811927-22-7	811927-23-8	811927-24-9
	811927-25-0	811927-26-1	811927-27-2	811927-28-3	811927-29-4
	811927-30-7	811927-31-8	811927-32-9	811927-33-0	811927-34-1
	811927-35-2	811927-36-3	811927-37-4	811927-38-5	811927-39-6
	811927-40-9	811927-41-0	811927-42-1	811927-43-2	811927-44-3
	811927-45-4	811927-46-5	811927-47-6	811927-48-7	811927-49-8
	811927-50-1	811927-51-2	811927-52-3	811927-53-4	811927-54-5
	811927-55-6	811927-56-7	811927-57-8	811927-58-9	811927-59-0
	811927-60-3	811927-61-4	811927-62-5	811927-63-6	811927-64-7
	811927-65-8	811927-66-9	811927-67-0	811927-68-1	811927-69-2
	811927-70-5	811927-71-6	811927-72-7	811927-73-8	811927-74-9
	811927-75-0	811927-76-1	811927-77-2	811927-78-3	811927-79-4
	811927-80-7	811927-81-8	811927-82-9	811927-83-0	811927-84-1
	811927-85-2	811927-86-3	811927-87-4	811927-88-5	811927-89-6
	811927-90-9	811927-91-0	811927-92-1	811927-93-2	811927-94-3
	811927-95-4	811927-96-5	811927-97-6	811927-98-7	811927-99-8
	811928-00-4	811928-01-5	811928-02-6	811928-03-7	811928-04-8
	811928-05-9	811928-06-0	811928-07-1	811928-08-2	811928-09-3
	811928-10-6	811928-11-7	811928-12-8	811928-13-9	811928-14-0
	811928-15-1	811928-16-2	811928-17-3	811928-18-4	811928-19-5
	811928-20-8	811928-21-9	811928-22-0	811928-23-1	811928-24-2
	811928-25-3	811928-26-4	811928-27-5	811928-28-6	811928-29-7
	811928-30-0	811928-31-1	811928-32-2	811928-33-3	811928-34-4
	811928-35-5	811928-36-6	811928-37-7	811928-38-8	811928-39-9
	811928-40-2	811928-41-3	811928-42-4	811928-43-5	811928-44-6
	811928-45-7	811928-46-8	811928-47-9	811928-48-0	811928-49-1
	811928-50-4	811928-51-5	811928-52-6	811928-53-7	811928-54-8
	811928-55-9	811928-56-0	811928-57-1	811928-58-2	811928-59-3
	811928-60-6	811928-61-7	811928-62-8	811928-63-9	811928-64-0
	811928-65-1	811928-66-2	811928-67-3	811928-68-4	811928-69-5
	RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)				
IT	811928-70-8	811928-71-9	811928-72-0	811928-73-1	811928-74-2
	811928-75-3	811928-76-4	811928-77-5	811928-78-6	811928-79-7
	811928-80-0	811928-81-1	811928-82-2	811928-83-3	811928-84-4
	811928-85-5	811928-86-6	811928-87-7	811928-88-8	811928-89-9
	811928-90-2	811928-91-3	811928-92-4	811928-93-5	811928-94-6
	811928-95-7	811928-96-8	811928-97-9	811928-98-0	811928-99-1

811929-00-7	811929-01-8	811929-02-9	811929-03-0	811929-04-1
811929-05-2	811929-06-3	811929-07-4	811929-08-5	811929-09-6
811929-10-9	811929-11-0	811929-12-1	811929-13-2	811929-14-3
811929-15-4	811929-16-5	811929-17-6	811929-18-7	811929-19-8
811929-20-1	811929-21-2	811929-22-3	811929-23-4	811929-24-5
811929-25-6	811929-26-7	811929-27-8	811929-28-9	811929-29-0
811929-30-3	811929-31-4	811929-32-5	811929-33-6	811929-34-7
811929-35-8	811929-36-9	811929-37-0	811929-38-1	811929-39-2
811929-40-5	811929-41-6	811929-42-7	811929-43-8	811929-44-9
811929-45-0	811929-46-1	811929-47-2	811929-48-3	811929-49-4
811929-50-7	811929-51-8	811929-52-9	811929-53-0	811929-54-1
811929-55-2	811929-56-3	811929-57-4	811929-58-5	811929-59-6
811929-60-9	811929-61-0	811929-62-1	811929-63-2	811929-64-3
811929-65-4	811929-66-5	811929-67-6	811929-68-7	811929-69-8
811929-70-1	811929-71-2	811929-72-3	811929-73-4	811929-74-5
811929-75-6	811929-76-7	811929-77-8	811929-78-9	811929-79-0
811929-80-3	811929-81-4	811929-82-5	811929-83-6	811929-84-7
811929-85-8	811929-86-9	811929-87-0	811929-88-1	811929-89-2
811929-90-5	811929-91-6	811929-92-7	811929-93-8	811929-94-9
811929-95-0	811929-96-1	811929-97-2	811929-98-3	811929-99-4
811930-00-4	811930-01-5	811930-02-6	811930-03-7	811930-04-8
811930-05-9	811930-06-0	811930-07-1	811930-08-2	811930-09-3
811930-10-6	811930-11-7	811930-12-8	811930-13-9	811930-14-0
811930-15-1	811930-16-2	811930-17-3	811930-18-4	811930-19-5
811930-20-8	811930-21-9	811930-22-0	811930-23-1	811930-24-2
811930-25-3	811930-26-4	811930-27-5	811930-28-6	811930-29-7
811930-30-0	811930-31-1	811930-32-2	811930-33-3	811930-34-4
811930-35-5	811930-36-6	811930-37-7	811930-38-8	811930-39-9
811930-40-2	811930-41-3	811930-42-4	811930-43-5	811930-44-6
811930-45-7	811930-46-8	811930-47-9	811930-48-0	811930-49-1
811930-50-4	811930-51-5	811930-52-6	811930-53-7	811930-54-8
811930-55-9	811930-56-0	811930-57-1	811930-58-2	811930-59-3
811930-60-6	811930-61-7	811930-62-8	811930-63-9	811930-64-0
811930-65-1	811930-66-2	811930-67-3	811930-68-4	811930-69-5
811930-70-8	811930-71-9	811930-72-0	811930-73-1	811930-74-2
811930-75-3	811930-76-4	811930-77-5	811930-78-6	811930-79-7
811930-80-0	811930-81-1	811930-82-2	811930-83-3	811930-84-4
811930-85-5	811930-86-6	811930-87-7	811930-88-8	811930-89-9
811930-90-2	811930-91-3	811930-92-4	811930-93-5	811930-94-6
811930-95-7	811930-96-8	811930-97-9	811930-98-0	811930-99-1
811931-00-7	811931-01-8	811931-02-9	811931-03-0	811931-04-1

RL: BSU (Biological study, unclassified); BUU (biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811931-05-2	811931-06-3	811931-07-4	811931-08-5	811931-09-6
	811931-10-9	811931-11-0	811931-12-1	811931-13-2	811931-14-3
	811931-15-4	811931-16-5	811931-17-6	811931-18-7	811931-19-8
	811931-20-1	811931-21-2	811931-22-3	811931-23-4	811931-24-5
	811931-25-6	811931-26-7	811931-27-8	811931-28-9	811931-29-0
	811931-30-3	811931-31-4	811931-32-5	811931-33-6	811931-34-7
	811931-35-8	811931-36-9	811931-37-0	811931-38-1	811931-39-2
	811931-40-5	811931-41-6	811931-42-7	811931-43-8	811931-44-9
	811931-45-0	811931-46-1	811931-47-2	811931-48-3	811931-49-4
	811931-50-7	811931-51-8	811931-52-9	811931-53-0	811931-54-1
	811931-55-2	811931-56-3	811931-57-4	811931-58-5	811931-59-6
	811931-60-9	811931-61-0	811931-62-1	811931-63-2	811931-64-3
	811931-65-4	811931-66-5	811931-67-6	811931-68-7	811931-69-8
	811931-70-1	811931-71-2	811931-72-3	811931-73-4	811931-74-5
	811931-75-6	811931-76-7	811931-77-8	811931-78-9	811931-79-0
	811931-80-3	811931-81-4	811931-82-5	811931-83-6	811931-84-7

811931-85-8	811931-86-9	811931-87-0	811931-88-1	811931-89-2
811931-90-5	811931-91-6	811931-92-7	811931-93-8	811931-94-9
811931-95-0	811931-96-1	811931-97-2	811931-98-3	811931-99-4
811932-00-0	811932-01-1	811932-02-2	811932-03-3	811932-04-4
811932-05-5	811932-06-6	811932-07-7	811932-08-8	811932-09-9
811932-10-2	811932-11-3	811932-12-4	811932-13-5	811932-14-6
811932-15-7	811932-16-8	811932-17-9	811932-18-0	811932-19-1
811932-20-4	811932-21-5	811932-22-6	811932-23-7	811932-24-8
811932-25-9	811932-26-0	811932-27-1	811932-28-2	811932-29-3
811932-30-6	811932-31-7	811932-32-8	811932-33-9	811932-34-0
811932-35-1	811932-36-2	811932-37-3	811932-38-4	811932-39-5
811932-40-8	811932-41-9	811932-42-0	811932-43-1	811932-44-2
811932-45-3	811932-46-4	811932-47-5	811932-48-6	811932-49-7
811932-50-0	811932-51-1	811932-52-2	811932-53-3	811932-54-4
811932-55-5	811932-56-6	811932-57-7	811932-58-8	811932-59-9
811932-60-2	811932-61-3	811932-62-4	811932-63-5	811932-64-6
811932-65-7	811932-66-8	811932-67-9	811932-68-0	811932-69-1
811932-70-4	811932-71-5	811932-72-6	811932-73-7	811932-74-8
811932-75-9	811932-76-0	811932-77-1	811932-78-2	811932-79-3
811932-80-6	811932-81-7	811932-82-8	811932-83-9	811932-84-0
811932-85-1	811932-86-2	811932-87-3	811932-88-4	811932-89-5
811932-90-8	811932-91-9	811932-92-0	811932-93-1	811932-94-2
811932-95-3	811932-96-4	811932-97-5	811932-98-6	811932-99-7
811933-00-3	811933-01-4	811933-02-5	811933-03-6	811933-04-7
811933-05-8	811933-06-9	811933-07-0	811933-08-1	811933-09-2
811933-10-5	811933-11-6	811933-12-7	811933-13-8	811933-14-9
811933-15-0	811933-16-1	811933-17-2	811933-18-3	811933-19-4
811933-20-7	811933-21-8	811933-22-9	811933-23-0	811933-24-1
811933-25-2	811933-26-3	811933-27-4	811933-28-5	811933-29-6
811933-30-9	811933-31-0	811933-32-1	811933-33-2	811933-34-3
811933-35-4	811933-36-5	811933-37-6	811933-38-7	811933-39-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811933-40-1	811933-41-2	811933-42-3	811933-43-4	811933-44-5
	811933-45-6	811933-46-7	811933-47-8	811933-48-9	811933-49-0
	811933-50-3	811933-51-4	811933-52-5	811933-53-6	811933-54-7
	811933-55-8	811933-56-9	811933-57-0	811933-58-1	811933-59-2
	811933-60-5	811933-61-6	811933-62-7	811933-63-8	811933-64-9
	811933-65-0	811933-66-1	811933-67-2	811933-68-3	811933-69-4
	811933-70-7	811933-71-8	811933-72-9	811933-73-0	811933-74-1
	811933-75-2	811933-76-3	811933-77-4	811933-78-5	811933-79-6
	811933-80-9	811933-81-0	811933-82-1	811933-83-2	811933-84-3
	811933-85-4	811933-86-5	811933-87-6	811933-88-7	811933-89-8
	811933-90-1	811933-91-2	811933-92-3	811933-93-4	811933-94-5
	811933-95-6	811933-96-7	811933-97-8	811933-98-9	811933-99-0
	811934-00-6	811934-01-7	811934-02-8	811934-03-9	811934-04-0
	811934-05-1	811934-06-2	811934-07-3	811934-08-4	811934-09-5
	811934-10-8	811934-11-9	811934-12-0	811934-13-1	811934-14-2
	811934-15-3	811934-16-4	811934-17-5	811934-18-6	811934-19-7
	811934-20-0	811934-21-1	811934-22-2	811934-23-3	811934-24-4
	811934-25-5	811934-26-6	811934-27-7	811934-28-8	811934-29-9
	811934-30-2	811934-31-3	811934-32-4	811934-33-5	811934-34-6
	811934-35-7	811934-36-8	811934-37-9	811934-38-0	811934-39-1
	811934-40-4	811934-41-5	811934-42-6	811934-43-7	811934-44-8
	811934-45-9	811934-46-0	811934-47-1	811934-48-2	811934-49-3
	811934-50-6	811934-51-7	811934-52-8	811934-53-9	811934-54-0
	811934-55-1	811934-56-2	811934-57-3	811934-58-4	811934-59-5
	811934-60-8	811934-61-9	811934-62-0	811934-63-1	811934-64-2
	811934-65-3	811934-67-5	811934-68-6	811934-69-7	811934-70-0

811934-71-1	811934-72-2	811934-73-3	811934-74-4	811934-75-5
811934-76-6	811934-77-7	811934-78-8	811934-79-9	811934-80-2
811934-81-3	811934-82-4	811934-83-5	811934-84-6	811934-85-7
811934-86-8	811934-87-9	811934-88-0	811934-89-1	811934-90-4
811934-91-5	811934-92-6	811934-93-7	811934-94-8	811934-95-9
811934-96-0	811934-97-1	811934-98-2	811934-99-3	811935-00-9
811935-01-0	811935-02-1	811935-03-2	811935-04-3	811935-05-4
811935-06-5	811935-07-6	811935-08-7	811935-09-8	811935-10-1
811935-11-2	811935-12-3	811935-13-4	811935-14-5	811935-15-6
811935-16-7	811935-17-8	811935-18-9	811935-19-0	811935-20-3
811935-21-4	811935-22-5	811935-23-6	811935-24-7	811935-25-8
811935-26-9	811935-27-0	811935-28-1	811935-29-2	811935-30-5
811935-31-6	811935-32-7	811935-33-8	811935-34-9	811935-35-0
811935-36-1	811935-37-2	811935-38-3	811935-39-4	811935-40-7
811935-41-8	811935-42-9	811935-43-0	811935-44-1	811935-45-2
811935-46-3	811935-47-4	811935-48-5	811935-49-6	811935-50-9
811935-51-0	811935-52-1	811935-53-2	811935-54-3	811935-55-4
811935-56-5	811935-57-6	811935-58-7	811935-59-8	811935-60-1
811935-61-2	811935-62-3	811935-63-4	811935-64-5	811935-65-6
811935-66-7	811935-67-8	811935-68-9	811935-69-0	811935-70-3
811935-71-4	811935-72-5	811935-73-6	811935-74-7	811935-75-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811935-76-9	811935-77-0	811935-78-1	811935-79-2	811935-80-5
	811935-81-6	811935-82-7	811935-83-8	811935-84-9	811935-85-0
	811935-86-1	811935-87-2	811935-88-3	811935-89-4	811935-90-7
	811935-91-8	811935-92-9	811935-93-0	811935-94-1	811935-95-2
	811935-96-3	811935-97-4	811935-98-5	811935-99-6	811936-00-2
	811936-01-3	811936-02-4	811936-03-5	811936-04-6	811936-05-7
	811936-06-8	811936-07-9	811936-08-0	811936-09-1	811936-10-4
	811936-11-5	811936-12-6	811936-13-7	811936-14-8	811936-15-9
	811936-16-0	811936-17-1	811936-18-2	811936-19-3	811936-20-6
	811936-21-7	811936-22-8	811936-23-9	811936-24-0	811936-25-1
	811936-26-2	811936-27-3	811936-28-4	811936-29-5	811936-30-8
	811936-31-9	811936-32-0	811936-33-1	811936-34-2	811936-35-3
	811936-36-4	811936-37-5	811936-38-6	811936-39-7	811936-40-0
	811936-41-1	811936-42-2	811936-43-3	811936-44-4	811936-45-5
	811936-46-6	811936-47-7	811936-48-8	811936-49-9	811936-50-2
	811936-51-3	811936-52-4	811936-53-5	811936-54-6	811936-55-7
	811936-56-8	811936-57-9	811936-58-0	811936-59-1	811936-60-4
	811936-61-5	811936-62-6	811936-63-7	811936-64-8	811936-65-9
	811936-66-0	811936-67-1	811936-68-2	811936-69-3	811936-70-6
	811936-71-7	811936-72-8	811936-73-9	811936-74-0	811936-75-1
	811936-76-2	811936-77-3	811936-78-4	811936-79-5	811936-80-8
	811936-81-9	811936-82-0	811936-83-1	811936-84-2	811936-85-3
	811936-86-4	811936-87-5	811936-88-6	811936-89-7	811936-90-0
	811936-91-1	811936-92-2	811936-93-3	811936-94-4	811936-95-5
	811936-96-6	811936-97-7	811936-98-8	811936-99-9	811937-00-5
	811937-01-6	811937-02-7	811937-03-8	811937-04-9	811937-05-0
	811937-06-1	811937-07-2	811937-08-3	811937-09-4	811937-10-7
	811937-11-8	811937-12-9	811937-13-0	811937-14-1	811937-15-2
	811937-16-3	811937-17-4	811937-18-5	811937-19-6	811937-20-9
	811937-21-0	811937-22-1	811937-23-2	811937-24-3	811937-25-4
	811937-26-5	811937-27-6	811937-28-7	811937-29-8	811937-30-1
	811937-31-2	811937-32-3	811937-33-4	811937-34-5	811937-35-6
	811937-36-7	811937-37-8	811937-38-9	811937-39-0	811937-40-3
	811937-41-4	811937-42-5	811937-43-6	811937-44-7	811937-45-8
	811937-46-9	811937-47-0	811937-48-1	811937-49-2	811937-50-5
	811937-51-6	811937-52-7	811937-53-8	811937-54-9	811937-55-0

811937-56-1 811937-57-2 811937-58-3 811937-59-4 811937-60-7  
 811937-61-8 811937-62-9 811937-63-0 811937-64-1 811937-65-2  
 811937-66-3 811937-67-4 811937-68-5 811937-69-6 811937-70-9  
 811937-71-0 811937-72-1 811937-73-2 811937-74-3 811937-75-4  
 811937-76-5 811937-77-6 811937-78-7 811937-79-8 811937-80-1  
 811937-81-2 811937-82-3 811937-83-4 811937-84-5 811937-85-6  
 811937-86-7 811937-87-8 811937-88-9 811937-89-0 811937-90-3  
 811937-91-4 811937-92-5 811937-93-6 811937-94-7 811937-95-8  
 811937-96-9 811937-97-0 811937-98-1 811937-99-2 811938-00-8  
 811938-01-9 811938-02-0 811938-03-1 811938-04-2 811938-05-3  
 811938-06-4 811938-07-5 811938-08-6 811938-09-7 811938-10-0  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 811938-11-1 811938-12-2 811938-13-3 811938-14-4 811938-15-5  
 811938-16-6 811938-17-7 811938-18-8 811938-19-9 811938-20-2  
 811938-21-3 811938-22-4 811938-23-5 811938-24-6 811938-25-7  
 811938-26-8 811938-27-9 811938-28-0 811938-29-1 811938-30-4  
 811938-31-5 811938-32-6 811938-33-7 811938-34-8 811938-35-9  
 811938-36-0 811938-37-1 811938-38-2 811938-39-3 811938-40-6  
 811938-41-7 811938-42-8 811938-43-9 811938-44-0 811938-45-1  
 811938-46-2 811938-47-3 811938-48-4 811938-49-5 811938-50-8  
 811938-51-9 811938-52-0 811938-53-1 811938-54-2 811938-55-3  
 811938-56-4 811938-57-5 811938-58-6 811938-59-7 811938-60-0  
 811938-61-1 811938-62-2 811938-63-3 811938-64-4 811938-65-5  
 811938-66-6 811938-67-7 811938-68-8 811938-69-9 811938-70-2  
 811938-71-3 811938-72-4 811938-73-5 811938-74-6 811938-75-7  
 811938-76-8 811938-77-9 811938-78-0 811938-79-1 811938-80-4  
 811938-81-5 811938-82-6 811938-83-7 811938-84-8 811938-85-9  
 811938-86-0 811938-87-1 811938-88-2 811938-89-3 811938-90-6  
 811938-91-7 811938-92-8 811938-93-9 811938-94-0 811938-95-1  
 811938-96-2 811938-97-3 811938-98-4 811938-99-5 811939-00-1  
 811939-01-2 811939-02-3 811939-03-4 811939-04-5 811939-05-6  
 811939-06-7 811939-07-8 811939-08-9 811939-09-0 811939-10-3  
 811939-11-4 811939-12-5 811939-13-6 811939-14-7 811939-15-8  
 811939-16-9 811939-17-0 811939-18-1 811939-19-2 811939-20-5  
 811939-21-6 811939-22-7 811939-23-8 811939-24-9 811939-25-0  
 811939-26-1 811939-27-2 811939-28-3 811939-29-4 811939-30-7  
 811939-31-8 811939-32-9 811939-33-0 811939-34-1 811939-35-2  
 811939-36-3 811939-37-4 811939-38-5 811939-39-6 811939-40-9  
 811939-41-0 811939-42-1 811939-43-2 811939-44-3 811939-45-4  
 811939-46-5 811939-47-6 811939-48-7 811939-49-8 811939-50-1  
 811939-51-2 811939-52-3 811939-53-4 811939-54-5 811939-55-6  
 811939-56-7 811939-57-8 811939-58-9 811939-59-0 811939-60-3  
 811939-61-4 811939-62-5 811939-63-6 811939-64-7 811939-65-8  
 811939-66-9 811939-67-0 811939-68-1 811939-69-2 811939-70-5  
 811939-71-6 811939-72-7 811939-73-8 811939-74-9 811939-75-0  
 811939-76-1 811939-77-2 811939-78-3 811939-79-4 811939-80-7  
 811939-81-8 811939-82-9 811939-83-0 811939-84-1 811939-86-3  
 811939-87-4 811939-88-5 811939-89-6 811939-90-9 811939-91-0  
 811939-92-1 811939-93-2 811939-94-3 811939-95-4 811939-96-5  
 811939-97-6 811939-98-7 811939-99-8 811940-00-8 811940-01-9  
 811940-02-0 811940-03-1 811940-04-2 811940-05-3 811940-06-4  
 811940-07-5 811940-08-6 811940-09-7 811940-10-0 811940-11-1  
 811940-12-2 811940-13-3 811940-14-4 811940-15-5 811940-16-6  
 811940-17-7 811940-18-8 811940-19-9 811940-20-2 811940-21-3  
 811940-22-4 811940-23-5 811940-24-6 811940-25-7 811940-26-8  
 811940-27-9 811940-28-0 811940-29-1 811940-30-4 811940-31-5  
 811940-32-6 811940-33-7 811940-34-8 811940-35-9 811940-36-0  
 811940-37-1 811940-38-2 811940-39-3 811940-40-6 811940-41-7

811940-42-8 811940-43-9 811940-44-0 811940-45-1 811940-46-2  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 811940-47-3 811940-48-4 811940-49-5 811940-50-8 811940-51-9  
 811940-52-0 811940-53-1 811940-54-2 811940-55-3 811940-56-4  
 811940-57-5 811940-58-6 811940-59-7 811940-60-0 811940-61-1  
 811940-62-2 811940-63-3 811940-64-4 811940-65-5 811940-66-6  
 811940-67-7 811940-68-8 811940-69-9 811940-70-2 811940-71-3  
 811940-72-4 811940-73-5 811940-74-6 811940-75-7 811940-76-8  
 811940-77-9 811940-78-0 811940-79-1 811940-80-4 811940-81-5  
 811940-82-6 811940-83-7 811940-84-8 811940-85-9 811940-86-0  
 811940-87-1 811940-88-2 811940-89-3 811940-90-6 811940-91-7  
 811940-92-8 811940-93-9 811940-94-0 811940-95-1 811940-96-2  
 811940-97-3 811940-98-4 811940-99-5 811941-00-1 811941-01-2  
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 811941-47-6 811941-48-7 811941-49-8 811941-50-1 811941-51-2  
 811941-52-3 811941-53-4 811941-54-5 811941-55-6 811941-56-7  
 811941-57-8 811941-58-9 811941-59-0 811941-60-3 811941-61-4  
 811941-62-5 811941-63-6 811941-64-7 811941-65-8 811941-66-9  
 811941-67-0 811941-68-1 811941-69-2 811941-70-5 811941-71-6  
 811941-72-7 811941-73-8 811941-74-9 811941-75-0 811941-76-1  
 811941-77-2 811941-78-3 811941-79-4 811941-80-7 811941-81-8  
 811941-82-9 811941-83-0 811941-84-1 811941-85-2 811941-86-3  
 811941-87-4 811941-88-5 811941-89-6 811941-90-9 811941-91-0  
 811941-92-1 811941-93-2 811941-94-3 811941-95-4 811941-96-5  
 811941-97-6 811941-98-7 811941-99-8 811942-00-4 811942-01-5  
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 811942-07-1 811942-08-2 811942-09-3 811942-10-6 811942-11-7  
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 811942-67-3 811942-68-4 811942-69-5 811942-70-8 811942-71-9  
 811942-72-0 811942-73-1 811942-74-2 811942-75-3 811942-76-4  
 811942-77-5 811942-78-6 811942-79-7 811942-80-0 811942-81-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 811942-82-2 811942-83-3 811942-84-4 811942-85-5 811942-86-6  
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 811942-97-9 811942-98-0 811942-99-1 811943-00-7 811943-01-8  
 811943-02-9 811943-03-0 811943-04-1 811943-05-2 811943-06-3

811943-07-4 811943-08-5 811943-09-6 811943-10-9 811943-11-0  
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 811943-17-6 811943-18-7 811943-19-8 811943-20-1 811943-21-2  
 811943-22-3 811943-23-4 811943-24-5 811943-25-6 811943-26-7  
 811943-27-8 811943-28-9 811943-29-0 811943-30-3 811943-31-4  
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 811943-42-7 811943-43-8 811943-44-9 811943-45-0 811943-46-1  
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 811943-62-1 811943-63-2 811943-64-3 811943-65-4 811943-66-5  
 811943-67-6 811943-68-7 811943-69-8 811943-70-1 811943-71-2  
 811943-72-3 811943-73-4 811943-74-5 811943-75-6 811943-76-7  
 811943-77-8 811943-78-9 811943-79-0 811943-80-3 811943-81-4  
 811943-82-5 811943-83-6 811943-84-7 811943-85-8 811943-86-9  
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 811943-92-7 811943-93-8 811943-94-9 811943-95-0 811943-96-1  
 811943-97-2 811943-98-3 811943-99-4 811944-00-0 811944-01-1  
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 811944-42-0 811944-43-1 811944-44-2 811944-45-3 811944-46-4  
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 811944-72-6 811944-73-7 811944-74-8 811944-75-9 811944-76-0  
 811944-77-1 811944-78-2 811944-79-3 811944-80-6 811944-81-7  
 811944-82-8 811944-83-9 811944-84-0 811944-85-1 811944-86-2  
 811944-87-3 811944-88-4 811944-89-5 811944-90-8 811944-91-9  
 811944-92-0 811944-93-1 811944-94-2 811944-95-3 811944-96-4  
 811944-97-5 811944-98-6 811944-99-7 811945-00-3 811945-01-4  
 811945-02-5 811945-03-6 811945-04-7 811945-05-8 811945-06-9  
 811945-07-0 811945-08-1 811945-09-2 811945-10-5 811945-11-6  
 811945-12-7 811945-13-8 811945-14-9 811945-15-0 811945-16-1

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 811945-17-2 811945-18-3 811945-19-4 811945-20-7 811945-21-8  
 811945-22-9 811945-23-0 811945-24-1 811945-25-2 811945-26-3  
 811945-27-4 811945-28-5 811945-29-6 811945-30-9 811945-31-0  
 811945-32-1 811945-33-2 811945-34-3 811945-35-4 811945-36-5  
 811945-37-6 811945-38-7 811945-39-8 811945-40-1 811945-41-2  
 811945-42-3 811945-43-4 811945-44-5 811945-45-6 811945-46-7  
 811945-47-8 811945-48-9 811945-49-0 811945-50-3 811945-51-4  
 811945-52-5 811945-53-6 811945-54-7 811945-55-8 811945-56-9  
 811945-57-0 811945-58-1 811945-59-2 811945-60-5 811945-61-6  
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 811945-67-2 811945-68-3 811945-69-4 811945-70-7 811945-71-8  
 811945-72-9 811945-73-0 811945-74-1 811945-75-2 811945-76-3  
 811945-77-4 811945-78-5 811945-80-9 811945-81-0 811945-82-1  
 811945-83-2 811945-84-3 811945-85-4 811945-86-5 811945-87-6  
 811945-88-7 811945-89-8 811945-90-1 811945-91-2 811945-92-3

811945-93-4	811945-94-5	811945-95-6	811945-96-7	811945-97-8
811945-98-9	811945-99-0	811946-00-6	811946-01-7	811946-02-8
811946-03-9	811946-04-0	811946-05-1	811946-06-2	811946-07-3
811946-08-4	811946-09-5	811946-10-8	811946-11-9	811946-12-0
811946-13-1	811946-14-2	811946-15-3	811946-16-4	811946-17-5
811946-18-6	811946-19-7	811946-20-0	811946-21-1	811946-22-2
811946-23-3	811946-24-4	811946-25-5	811946-26-6	811946-27-7
811946-28-8	811946-29-9	811946-30-2	811946-31-3	811946-32-4
811946-33-5	811946-34-6	811946-35-7	811946-36-8	811946-37-9
811946-38-0	811946-39-1	811946-40-4	811946-41-5	811946-42-6
811946-43-7	811946-44-8	811946-45-9	811946-46-0	811946-47-1
811946-48-2	811946-49-3	811946-50-6	811946-51-7	811946-52-8
811946-53-9	811946-54-0	811946-55-1	811946-56-2	811946-57-3
811946-58-4	811946-59-5	811946-60-8	811946-61-9	811946-62-0
811946-63-1	811946-64-2	811946-65-3	811946-66-4	811946-67-5
811946-68-6	811946-69-7	811946-70-0	811946-71-1	811946-72-2
811946-73-3	811946-74-4	811946-75-5	811946-76-6	811946-77-7
811946-78-8	811946-79-9	811946-80-2	811946-81-3	811946-82-4
811946-83-5	811946-84-6	811946-85-7	811946-86-8	811946-87-9
811946-88-0	811946-89-1	811946-90-4	811946-91-5	811946-92-6
811946-93-7	811946-94-8	811946-95-9	811946-96-0	811946-97-1
811946-98-2	811946-99-3	811947-00-9	811947-01-0	811947-02-1
811947-03-2	811947-04-3	811947-05-4	811947-06-5	811947-07-6
811947-08-7	811947-09-8	811947-10-1	811947-11-2	811947-12-3
811947-13-4	811947-14-5	811947-15-6	811947-16-7	811947-17-8
811947-18-9	811947-19-0	811947-20-3	811947-21-4	811947-22-5
811947-23-6	811947-24-7	811947-25-8	811947-26-9	811947-27-0
811947-28-1	811947-29-2	811947-30-5	811947-31-6	811947-32-7
811947-33-8	811947-34-9	811947-35-0	811947-36-1	811947-37-2
811947-38-3	811947-39-4	811947-40-7	811947-41-8	811947-42-9
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811947-48-5	811947-49-6	811947-50-9	811947-51-0	811947-52-1

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IT	811947-53-2	811947-54-3	811947-55-4	811947-56-5	811947-57-6
	811947-58-7	811947-59-8	811947-60-1	811947-61-2	811947-62-3
	811947-63-4	811947-64-5	811947-65-6	811947-66-7	811947-67-8
	811947-68-9	811947-69-0	811947-70-3	811947-71-4	811947-72-5
	811947-73-6	811947-74-7	811947-75-8	811947-76-9	811947-77-0
	811947-78-1	811947-79-2	811947-80-5	811947-81-6	811947-82-7
	811947-83-8	811947-84-9	811947-85-0	811947-86-1	811947-87-2
	811947-88-3	811947-89-4	811947-90-7	811947-91-8	811947-92-9
	811947-93-0	811947-94-1	811947-95-2	811947-96-3	811947-97-4
	811947-98-5	811947-99-6	811948-00-2	811948-01-3	811948-02-4
	811948-03-5	811948-04-6	811948-05-7	811948-06-8	811948-07-9
	811948-08-0	811948-09-1	811948-10-4	811948-11-5	811948-12-6
	811948-13-7	811948-14-8	811948-15-9	811948-16-0	811948-17-1
	811948-18-2	811948-19-3	811948-20-6	811948-21-7	811948-22-8
	811948-23-9	811948-24-0	811948-25-1	811948-26-2	811948-27-3
	811948-28-4	811948-29-5	811948-30-8	811948-31-9	811948-32-0
	811948-33-1	811948-34-2	811948-35-3	811948-36-4	811948-37-5
	811948-38-6	811948-39-7	811948-40-0	811948-41-1	811948-42-2
	811948-43-3	811948-44-4	811948-45-5	811948-46-6	811948-47-7
	811948-48-8	811948-49-9	811948-50-2	811948-51-3	811948-52-4
	811948-53-5	811948-54-6	811948-55-7	811948-56-8	811948-57-9
	811948-58-0	811948-59-1	811948-60-4	811948-61-5	811948-62-6
	811948-63-7	811948-64-8	811948-65-9	811948-66-0	811948-67-1
	811948-68-2	811948-69-3	811948-70-6	811948-71-7	811948-72-8
	811948-73-9	811948-74-0	811948-75-1	811948-76-2	811948-77-3

811948-78-4	811948-79-5	811948-80-8	811948-81-9	811948-82-0
811948-83-1	811948-84-2	811948-85-3	811948-86-4	811948-87-5
811948-88-6	811948-89-7	811948-90-0	811948-91-1	811948-92-2
811948-93-3	811948-94-4	811948-95-5	811948-96-6	811948-97-7
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811949-18-5	811949-19-6	811949-20-9	811949-21-0	811949-22-1
811949-23-2	811949-24-3	811949-25-4	811949-26-5	811949-27-6
811949-28-7	811949-29-8	811949-30-1	811949-31-2	811949-32-3
811949-33-4	811949-34-5	811949-35-6	811949-36-7	811949-37-8
811949-38-9	811949-39-0	811949-40-3	811949-41-4	811949-42-5
811949-43-6	811949-44-7	811949-45-8	811949-46-9	811949-47-0
811949-48-1	811949-49-2	811949-50-5	811949-51-6	811949-52-7
811949-53-8	811949-54-9	811949-55-0	811949-56-1	811949-57-2
811949-58-3	811949-59-4	811949-60-7	811949-61-8	811949-62-9
811949-63-0	811949-64-1	811949-65-2	811949-66-3	811949-67-4
811949-68-5	811949-69-6	811949-70-9	811949-71-0	811949-72-1
811949-73-2	811949-74-3	811949-75-4	811949-76-5	811949-77-6
811949-78-7	811949-79-8	811949-80-1	811949-81-2	811949-82-3
811949-83-4	811949-84-5	811949-85-6	811949-86-7	811949-87-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811949-88-9	811949-89-0	811949-90-3	811949-91-4	811949-92-5
	811949-93-6	811949-94-7	811949-95-8	811949-96-9	811949-97-0
	811949-98-1	811949-99-2	811950-00-2	811950-01-3	811950-02-4
	811950-03-5	811950-04-6	811950-05-7	811950-06-8	811950-07-9
	811950-08-0	811950-09-1	811950-10-4	811950-11-5	811950-12-6
	811950-13-7	811950-14-8	811950-15-9	811950-16-0	811950-17-1
	811950-18-2	811950-19-3	811950-20-6	811950-21-7	811950-22-8
	811950-23-9	811950-24-0	811950-25-1	811950-26-2	811950-27-3
	811950-28-4	811950-29-5	811950-30-8	811950-31-9	811950-32-0
	811950-33-1	811950-34-2	811950-35-3	811950-36-4	811950-37-5
	811950-38-6	811950-39-7	811950-40-0	811950-41-1	811950-42-2
	811950-43-3	811950-44-4	811950-45-5	811950-46-6	811950-47-7
	811950-48-8	811950-49-9	811950-50-2	811950-51-3	811950-52-4
	811950-53-5	811950-54-6	811950-55-7	811950-56-8	811950-57-9
	811950-58-0	811950-59-1	811950-60-4	811950-61-5	811950-62-6
	811950-63-7	811950-64-8	811950-65-9	811950-66-0	811950-67-1
	811950-68-2	811950-69-3	811950-70-6	811950-71-7	811950-72-8
	811950-73-9	811950-74-0	811950-75-1	811950-76-2	811950-77-3
	811950-78-4	811950-79-5	811950-80-8	811950-81-9	811950-82-0
	811950-83-1	811950-84-2	811950-85-3	811950-86-4	811950-87-5
	811950-88-6	811950-89-7	811950-90-0	811950-91-1	811950-92-2
	811950-93-3	811950-94-4	811950-95-5	811950-96-6	811950-97-7
	811950-98-8	811950-99-9	811951-00-5	811951-01-6	811951-02-7
	811951-03-8	811951-04-9	811951-05-0	811951-06-1	811951-07-2
	811951-08-3	811951-09-4	811951-10-7	811951-11-8	811951-12-9
	811951-13-0	811951-14-1	811951-15-2	811951-16-3	811951-17-4
	811951-18-5	811951-19-6	811951-20-9	811951-21-0	811951-22-1
	811951-23-2	811951-24-3	811951-25-4	811951-26-5	811951-27-6
	811951-28-7	811951-29-8	811951-30-1	811951-31-2	811951-32-3
	811951-33-4	811951-34-5	811951-35-6	811951-36-7	811951-37-8
	811951-38-9	811951-39-0	811951-40-3	811951-41-4	811951-42-5
	811951-43-6	811951-44-7	811951-45-8	811951-46-9	811951-47-0
	811951-48-1	811951-49-2	811951-50-5	811951-51-6	811951-52-7
	811951-53-8	811951-54-9	811951-55-0	811951-56-1	811951-57-2
	811951-58-3	811951-59-4	811951-60-7	811951-61-8	811951-62-9

811951-63-0	811951-64-1	811951-65-2	811951-66-3	811951-67-4
811951-68-5	811951-69-6	811951-70-9	811951-71-0	811951-72-1
811951-73-2	811951-74-3	811951-75-4	811951-76-5	811951-77-6
811951-78-7	811951-79-8	811951-80-1	811951-81-2	811951-82-3
811951-83-4	811951-84-5	811951-85-6	811951-86-7	811951-87-8
811951-88-9	811951-89-0	811951-90-3	811951-91-4	811951-92-5
811951-93-6	811951-94-7	811951-95-8	811951-96-9	811951-97-0
811951-98-1	811951-99-2	811952-00-8	811952-01-9	811952-02-0
811952-03-1	811952-04-2	811952-05-3	811952-06-4	811952-07-5
811952-08-6	811952-09-7	811952-10-0	811952-11-1	811952-12-2
811952-13-3	811952-14-4	811952-15-5	811952-16-6	811952-17-7
811952-18-8	811952-19-9	811952-20-2	811952-21-3	811952-22-4

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811952-23-5	811952-24-6	811952-25-7	811952-26-8	811952-27-9
	811952-28-0	811952-29-1	811952-30-4	811952-31-5	811952-32-6
	811952-33-7	811952-34-8	811952-35-9	811952-36-0	811952-37-1
	811952-38-2	811952-39-3	811952-40-6	811952-41-7	811952-42-8
	811952-43-9	811952-44-0	811952-45-1	811952-46-2	811952-47-3
	811952-48-4	811952-49-5	811952-50-8	811952-51-9	811952-52-0
	811952-53-1	811952-54-2	811952-55-3	811952-56-4	811952-57-5
	811952-58-6	811952-59-7	811952-60-0	811952-61-1	811952-62-2
	811952-63-3	811952-64-4	811952-65-5	811952-66-6	811952-67-7
	811952-68-8	811952-69-9	811952-70-2	811952-71-3	811952-72-4
	811952-73-5	811952-74-6	811952-75-7	811952-76-8	811952-77-9
	811952-78-0	811952-79-1	811952-80-4	811952-81-5	811952-82-6
	811952-83-7	811952-84-8	811952-85-9	811952-86-0	811952-87-1
	811952-88-2	811952-89-3	811952-90-6	811952-91-7	811952-92-8
	811952-93-9	811952-94-0	811952-95-1	811952-96-2	811952-97-3
	811952-98-4	811952-99-5	811953-00-1	811953-01-2	811953-02-3
	811953-03-4	811953-04-5	811953-05-6	811953-06-7	811953-07-8
	811953-08-9	811953-09-0	811953-10-3	811953-11-4	811953-12-5
	811953-13-6	811953-14-7	811953-15-8	811953-16-9	811953-17-0
	811953-18-1	811953-19-2	811953-20-5	811953-21-6	811953-22-7
	811953-23-8	811953-24-9	811953-25-0	811953-26-1	811953-27-2
	811953-28-3	811953-29-4	811953-30-7	811953-31-8	811953-32-9
	811953-33-0	811953-34-1	811953-35-2	811953-36-3	811953-37-4
	811953-38-5	811953-39-6	811953-40-9	811953-41-0	811953-42-1
	811953-43-2	811953-44-3	811953-45-4	811953-46-5	811953-47-6
	811953-48-7	811953-49-8	811953-50-1	811953-51-2	811953-52-3
	811953-53-4	811953-54-5	811953-55-6	811953-56-7	811953-57-8
	811953-58-9	811953-59-0	811953-60-3	811953-61-4	811953-62-5
	811953-63-6	811953-64-7	811953-65-8	811953-66-9	811953-67-0
	811953-68-1	811953-69-2	811953-70-5	811953-71-6	811953-72-7
	811953-73-8	811953-74-9	811953-75-0	811953-76-1	811953-77-2
	811953-78-3	811953-79-4	811953-80-7	811953-81-8	811953-82-9
	811953-83-0	811953-84-1	811953-85-2	811953-86-3	811953-87-4
	811953-88-5	811953-89-6	811953-90-9	811953-91-0	811953-92-1
	811953-93-2	811953-94-3	811953-95-4	811953-96-5	811953-97-6
	811953-98-7	811953-99-8	811954-00-4	811954-01-5	811954-02-6
	811954-03-7	811954-04-8	811954-05-9	811954-06-0	811954-07-1
	811954-08-2	811954-09-3	811954-10-6	811954-11-7	811954-12-8
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	811954-18-4	811954-19-5	811954-20-8	811954-21-9	811954-22-0
	811954-23-1	811954-24-2	811954-25-3	811954-26-4	811954-27-5
	811954-28-6	811954-29-7	811954-30-0	811954-31-1	811954-32-2
	811954-33-3	811954-34-4	811954-35-5	811954-36-6	811954-37-7
	811954-38-8	811954-39-9	811954-40-2	811954-41-3	811954-42-4
	811954-43-5	811954-44-6	811954-45-7	811954-46-8	811954-47-9

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 811954-53-7 811954-54-8 811954-55-9 811954-56-0 811954-57-1  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

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 811954-68-4 811954-69-5 811954-70-8 811954-71-9 811954-72-0  
 811954-73-1 811954-74-2 811954-75-3 811954-76-4 811954-77-5  
 811954-78-6 811954-79-7 811954-80-0 811954-81-1 811954-82-2  
 811954-83-3 811954-84-4 811954-85-5 811954-86-6 811954-87-7  
 811954-88-8 811954-89-9 811954-90-2 811954-91-3 811954-92-4  
 811954-93-5 811954-94-6 811954-95-7 811954-96-8 811954-97-9  
 811954-98-0 811954-99-1 811955-00-7 811955-01-8 811955-02-9  
 811955-03-0 811955-04-1 811955-05-2 811955-06-3 811955-07-4  
 811955-08-5 811955-09-6 811955-10-9 811955-11-0 811955-12-1  
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 811955-88-1 811955-89-2 811955-90-5 811955-91-6 811955-92-7  
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 811955-98-3 811955-99-4 811956-00-0 811956-01-1 811956-02-2  
 811956-03-3 811956-04-4 811956-05-5 811956-06-6 811956-07-7  
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 811956-18-0 811956-19-1 811956-20-4 811956-21-5 811956-22-6  
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 811956-28-2 811956-29-3 811956-30-6 811956-31-7 811956-32-8  
 811956-33-9 811956-34-0 811956-35-1 811956-36-2 811956-37-3  
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 811956-48-6 811956-49-7 811956-50-0 811956-51-1 811956-52-2  
 811956-53-3 811956-54-4 811956-55-5 811956-56-6 811956-57-7  
 811956-58-8 811956-59-9 811956-60-2 811956-61-3 811956-62-4  
 811956-63-5 811956-64-6 811956-65-7 811956-66-8 811956-67-9  
 811956-68-0 811956-69-1 811956-70-4 811956-71-5 811956-72-6  
 811956-73-7 811956-74-8 811956-75-9 811956-76-0 811956-77-1  
 811956-78-2 811956-79-3 811956-80-6 811956-81-7 811956-82-8  
 811956-83-9 811956-84-0 811956-85-1 811956-86-2 811956-87-3  
 811956-88-4 811956-89-5 811956-90-8 811956-91-9 811956-92-0  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 811956-93-1 811956-94-2 811956-95-3 811956-96-4 811956-97-5  
 811956-98-6 811956-99-7 811957-00-3 811957-01-4 811957-02-5  
 811957-03-6 811957-04-7 811957-05-8 811957-06-9 811957-07-0  
 811957-08-1 811957-09-2 811957-10-5 811957-11-6 811957-12-7

811957-13-8	811957-14-9	811957-15-0	811957-16-1	811957-17-2
811957-18-3	811957-19-4	811957-20-7	811957-21-8	811957-22-9
811957-23-0	811957-24-1	811957-25-2	811957-26-3	811957-27-4
811957-28-5	811957-29-6	811957-30-9	811957-31-0	811957-32-1
811957-33-2	811957-34-3	811957-35-4	811957-36-5	811957-37-6
811957-38-7	811957-39-8	811957-40-1	811957-41-2	811957-42-3
811957-43-4	811957-44-5	811957-45-6	811957-46-7	811957-47-8
811957-48-9	811957-49-0	811957-50-3	811957-51-4	811957-52-5
811957-53-6	811957-54-7	811957-55-8	811957-56-9	811957-57-0
811957-58-1	811957-59-2	811957-60-5	811957-61-6	811957-62-7
811957-63-8	811957-64-9	811957-65-0	811957-66-1	811957-67-2
811957-68-3	811957-69-4	811957-70-7	811957-71-8	811957-72-9
811957-73-0	811957-74-1	811957-75-2	811957-76-3	811957-77-4
811957-78-5	811957-79-6	811957-80-9	811957-81-0	811957-82-1
811957-83-2	811957-84-3	811957-85-4	811957-86-5	811957-87-6
811957-88-7	811957-89-8	811957-90-1	811957-91-2	811957-92-3
811957-93-4	811957-94-5	811957-95-6	811957-96-7	811957-97-8
811957-98-9	811957-99-0	811958-00-6	811958-01-7	811958-02-8
811958-03-9	811958-04-0	811958-05-1	811958-06-2	811958-07-3
811958-08-4	811958-09-5	811958-10-8	811958-11-9	811958-12-0
811958-13-1	811958-14-2	811958-15-3	811958-16-4	811958-17-5
811958-18-6	811958-19-7	811958-20-0	811958-21-1	811958-22-2
811958-23-3	811958-24-4	811958-25-5	811958-26-6	811958-27-7
811958-28-8	811958-29-9	811958-30-2	811958-31-3	811958-32-4
811958-33-5	811958-34-6	811958-35-7	811958-36-8	811958-37-9
811958-38-0	811958-39-1	811958-40-4	811958-41-5	811958-42-6
811958-43-7	811958-44-8	811958-45-9	811958-46-0	811958-47-1
811958-48-2	811958-49-3	811958-50-6	811958-51-7	811958-52-8
811958-53-9	811958-54-0	811958-55-1	811958-56-2	811958-57-3
811958-58-4	811958-59-5	811958-60-8	811958-61-9	811958-62-0
811958-63-1	811958-64-2	811958-65-3	811958-66-4	811958-67-5
811958-68-6	811958-69-7	811958-70-0	811958-71-1	811958-72-2
811958-73-3	811958-74-4	811958-75-5	811958-76-6	811958-77-7
811958-78-8	811958-79-9	811958-80-2	811958-81-3	811958-82-4
811958-83-5	811958-84-6	811958-85-7	811958-86-8	811958-87-9
811958-88-0	811958-89-1	811958-90-4	811958-91-5	811958-92-6
811958-93-7	811958-94-8	811958-95-9	811958-96-0	811958-97-1
811958-98-2	811958-99-3	811959-00-9	811959-01-0	811959-02-1
811959-03-2	811959-04-3	811959-05-4	811959-06-5	811959-07-6
811959-08-7	811959-09-8	811959-10-1	811959-11-2	811959-12-3
811959-13-4	811959-14-5	811959-15-6	811959-16-7	811959-17-8
811959-18-9	811959-19-0	811959-20-3	811959-21-4	811959-22-5
811959-23-6	811959-24-7	811959-25-8	811959-26-9	811959-27-0

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811959-28-1	811959-29-2	811959-30-5	811959-31-6	811959-32-7
	811959-33-8	811959-34-9	811959-35-0	811959-36-1	811959-37-2
	811959-38-3	811959-39-4	811959-40-7	811959-41-8	811959-42-9
	811959-43-0	811959-44-1	811959-45-2	811959-46-3	811959-47-4
	811959-48-5	811959-49-6	811959-50-9	811959-51-0	811959-52-1
	811959-53-2	811959-54-3	811959-55-4	811959-56-5	811959-57-6
	811959-58-7	811959-59-8	811959-60-1	811959-61-2	811959-62-3
	811959-63-4	811959-64-5	811959-65-6	811959-66-7	811959-67-8
	811959-68-9	811959-69-0	811959-70-3	811959-71-4	811959-72-5
	811959-73-6	811959-74-7	811959-75-8	811959-76-9	811959-77-0
	811959-78-1	811959-79-2	811959-80-5	811959-81-6	811959-82-7
	811959-83-8	811959-84-9	811959-85-0	811959-86-1	811959-87-2
	811959-88-3	811959-89-4	811959-90-7	811959-91-8	811959-92-9
	811959-93-0	811959-94-1	811959-95-2	811959-96-3	811959-97-4

811959-98-5	811959-99-6	811960-00-6	811960-01-7	811960-02-8
811960-03-9	811960-04-0	811960-05-1	811960-06-2	811960-07-3
811960-08-4	811960-09-5	811960-10-8	811960-11-9	811960-12-0
811960-13-1	811960-14-2	811960-15-3	811960-16-4	811960-17-5
811960-18-6	811960-19-7	811960-20-0	811960-21-1	811960-22-2
811960-23-3	811960-24-4	811960-25-5	811960-26-6	811960-27-7
811960-28-8	811960-29-9	811960-30-2	811960-31-3	811960-32-4
811960-33-5	811960-34-6	811960-35-7	811960-36-8	811960-37-9
811960-38-0	811960-39-1	811960-40-4	811960-41-5	811960-42-6
811960-43-7	811960-44-8	811960-45-9	811960-46-0	811960-47-1
811960-48-2	811960-49-3	811960-50-6	811960-51-7	811960-52-8
811960-53-9	811960-54-0	811960-55-1	811960-56-2	811960-57-3
811960-58-4	811960-59-5	811960-60-8	811960-61-9	811960-62-0
811960-63-1	811960-64-2	811960-65-3	811960-66-4	811960-67-5
811960-68-6	811960-69-7	811960-70-0	811960-71-1	811960-72-2
811960-73-3	811960-74-4	811960-75-5	811960-76-6	811960-77-7
811960-78-8	811960-79-9	811960-80-2	811960-81-3	811960-82-4
811960-83-5	811960-84-6	811960-85-7	811960-86-8	811960-87-9
811960-88-0	811960-89-1	811960-90-4	811960-91-5	811960-92-6
811960-93-7	811960-94-8	811960-95-9	811960-96-0	811960-97-1
811960-98-2	811960-99-3	811961-00-9	811961-01-0	811961-02-1
811961-03-2	811961-04-3	811961-05-4	811961-06-5	811961-07-6
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811961-13-4	811961-14-5	811961-15-6	811961-16-7	811961-17-8
811961-18-9	811961-19-0	811961-20-3	811961-21-4	811961-22-5
811961-23-6	811961-24-7	811961-25-8	811961-26-9	811961-27-0
811961-28-1	811961-29-2	811961-30-5	811961-31-6	811961-32-7
811961-33-8	811961-34-9	811961-35-0	811961-36-1	811961-37-2
811961-38-3	811961-39-4	811961-40-7	811961-41-8	811961-42-9
811961-43-0	811961-44-1	811961-45-2	811961-46-3	811961-47-4
811961-48-5	811961-49-6	811961-50-9	811961-51-0	811961-52-1
811961-53-2	811961-54-3	811961-55-4	811961-56-5	811961-57-6
811961-58-7	811961-59-8	811961-60-1	811961-61-2	811961-62-3

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811961-63-4	811961-64-5	811961-65-6	811961-66-7	811961-67-8
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	811961-73-6	811961-74-7	811961-75-8	811961-76-9	811961-77-0
	811961-78-1	811961-79-2	811961-80-5	811961-81-6	811961-82-7
	811961-83-8	811961-84-9	811961-85-0	811961-86-1	811961-87-2
	811961-88-3	811961-89-4	811961-90-7	811961-91-8	811961-92-9
	811961-93-0	811961-94-1	811961-95-2	811961-96-3	811961-97-4
	811961-98-5	811961-99-6	811962-00-2	811962-01-3	811962-02-4
	811962-03-5	811962-04-6	811962-05-7	811962-06-8	811962-07-9
	811962-08-0	811962-09-1	811962-10-4	811962-11-5	811962-12-6
	811962-13-7	811962-14-8	811962-15-9	811962-16-0	811962-17-1
	811962-18-2	811962-19-3	811962-20-6	811962-21-7	811962-22-8
	811962-23-9	811962-24-0	811962-25-1	811962-26-2	811962-27-3
	811962-28-4	811962-29-5	811962-30-8	811962-31-9	811962-32-0
	811962-33-1	811962-34-2	811962-35-3	811962-36-4	811962-37-5
	811962-38-6	811962-39-7	811962-40-0	811962-41-1	811962-42-2
	811962-43-3	811962-44-4	811962-45-5	811962-46-6	811962-47-7
	811962-48-8	811962-49-9	811962-50-2	811962-51-3	811962-52-4
	811962-53-5	811962-54-6	811962-55-7	811962-56-8	811962-57-9
	811962-58-0	811962-59-1	811962-60-4	811962-61-5	811962-62-6
	811962-63-7	811962-64-8	811962-65-9	811962-66-0	811962-67-1
	811962-68-2	811962-69-3	811962-70-6	811962-71-7	811962-72-8
	811962-73-9	811962-74-0	811962-75-1	811962-76-2	811962-77-3
	811962-78-4	811962-79-5	811962-80-8	811962-81-9	811962-82-0

811962-83-1	811962-84-2	811962-85-3	811962-86-4	811962-87-5
811962-88-6	811962-89-7	811962-90-0	811962-91-1	811962-92-2
811962-93-3	811962-94-4	811962-95-5	811962-96-6	811962-97-7
811962-98-8	811962-99-9	811963-00-5	811963-01-6	811963-02-7
811963-03-8	811963-04-9	811963-05-0	811963-06-1	811963-07-2
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811963-18-5	811963-19-6	811963-20-9	811963-21-0	811963-22-1
811963-23-2	811963-24-3	811963-25-4	811963-26-5	811963-27-6
811963-28-7	811963-29-8	811963-30-1	811963-31-2	811963-32-3
811963-33-4	811963-34-5	811963-35-6	811963-36-7	811963-37-8
811963-38-9	811963-39-0	811963-40-3	811963-41-4	811963-42-5
811963-43-6	811963-44-7	811963-45-8	811963-46-9	811963-47-0
811963-48-1	811963-49-2	811963-50-5	811963-51-6	811963-52-7
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811963-58-3	811963-59-4	811963-60-7	811963-61-8	811963-62-9
811963-63-0	811963-64-1	811963-65-2	811963-66-3	811963-67-4
811963-68-5	811963-69-6	811963-70-9	811963-71-0	811963-72-1
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811963-83-4	811963-84-5	811963-85-6	811963-86-7	811963-87-8
811963-88-9	811963-89-0	811963-90-3	811963-91-4	811963-92-5
811963-93-6	811963-94-7	811963-95-8	811963-96-9	811963-97-0

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811963-98-1	811963-99-2	811964-00-8	811964-01-9	811964-02-0
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811965-93-2	811965-94-3	811965-95-4	811965-96-5	811965-97-6
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	811966-33-3	811966-34-4	811966-35-5	811966-36-6	811966-37-7
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	811966-48-0	811966-49-1	811966-50-4	811966-51-5	811966-52-6
	811966-53-7	811966-54-8	811966-55-9	811966-56-0	811966-57-1
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	811966-63-9	811966-64-0	811966-65-1	811966-66-2	811966-67-3
	811966-68-4	811966-69-5	811966-70-8	811966-71-9	811966-72-0
	811966-73-1	811966-74-2	811966-75-3	811966-76-4	811966-77-5
	811966-78-6	811966-79-7	811966-80-0	811966-81-1	811966-82-2
	811966-83-3	811966-84-4	811966-85-5	811966-86-6	811966-87-7
	811966-88-8	811966-89-9	811966-90-2	811966-91-3	811966-92-4
	811966-93-5	811966-94-6	811966-95-7	811966-96-8	811966-97-9
	811966-98-0	811966-99-1	811967-00-7	811967-01-8	811967-02-9
	811967-03-0	811967-04-1	811967-05-2	811967-06-3	811967-07-4
	811967-08-5	811967-09-6	811967-10-9	811967-11-0	811967-12-1
	811967-13-2	811967-14-3	811967-15-4	811967-16-5	811967-17-6
	811967-18-7	811967-19-8	811967-20-1	811967-21-2	811967-22-3
	811967-23-4	811967-24-5	811967-25-6	811967-26-7	811967-27-8
	811967-28-9	811967-29-0	811967-30-3	811967-31-4	811967-32-5
	811967-33-6	811967-34-7	811967-35-8	811967-36-9	811967-37-0
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	811967-68-7	811967-69-8	811967-70-1	811967-71-2	811967-72-3
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	811967-78-9	811967-79-0	811967-80-3	811967-81-4	811967-82-5
	811967-83-6	811967-84-7	811967-85-8	811967-86-9	811967-87-0
	811967-88-1	811967-89-2	811967-90-5	811967-91-6	811967-92-7
	811967-93-8	811967-94-9	811967-95-0	811967-96-1	811967-97-2
	811967-98-3	811967-99-4	811968-00-0	811968-01-1	811968-02-2
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	811968-13-5	811968-14-6	811968-15-7	811968-16-8	811968-17-9
	811968-18-0	811968-19-1	811968-20-4	811968-21-5	811968-22-6
	811968-23-7	811968-24-8	811968-25-9	811968-26-0	811968-27-1
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	811968-33-9	811968-34-0	811968-35-1	811968-36-2	811968-37-3
	811968-38-4	811968-39-5	811968-40-8	811968-41-9	811968-42-0
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	811968-48-6	811968-49-7	811968-50-0	811968-51-1	811968-52-2

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 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 811968-68-0 811968-69-1 811968-70-4 811968-71-5 811968-72-6  
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 811968-93-1 811968-94-2 811968-95-3 811968-96-4 811968-97-5  
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 811969-03-6 811969-04-7

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 9005-53-2P, Lignin, preparation 11078-30-1P, Galactomannan  
 RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 7723-14-0, Phosphorus, biological studies 7727-37-9, Nitrogen, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (improved use and/or uptake of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

L34 ANSWER 10 OF 169 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:5197 HCAPLUS

DN 142:50312

ED Entered STN: 05 Jan 2005

TI Nucleic acid molecules and encoded proteins associated with maize and their uses for plant improvement

IN La Rosa, Thomas J.; Zhou, Yihua; Kovalic, David; Cao, Yongwei

PA USA

SO U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DT Patent

LA English

IC C07H021-04; A01H001-00; C12N015-82; C12N005-04

NCL 435069100; 435419000; 435468000; 530370000; 536023600; 800278000

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 6, 11

FAN. CNT 76

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004214272	A1	20041028	US 2003-425115	20030428 <--
	US 2004214272	A1	20041028	US 2003-425115	20030428 <--
PRAI	US 2003-425115	A	20030428	<--	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2004214272	IC	C07H021-04IC C12N005-04	A01H001-00IC	C12N015-82IC
	NCL	435069100; 435419000; 435468000; 530370000; 536023600; 800278000		

AB Recombinant polynucleotides useful for improvement of plants are provided. In particular, a total of 184,663 cDNA sequences are provided from cDNA

libraries generated from *Zea mays* (corn). The polypeptides encoded by these polynucleotide sequences are also provided. The open reading frame in each polynucleotide sequence is identified by a combination of predictive and homol. based methods. Functions of polypeptides are determined using a hierarchical classification tool (FunCAT) and five public classification schemes (GO\_BP, GO\_CC, GO\_MF, KEGG, and EC) and one internal Monsanto classification scheme (POI). The disclosed recombinant polynucleotides and polypeptides find use in production of transgenic plants to produce plants having improved properties. [This abstract record is one of 74 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

ST plant protein cDNA sequence transformation; corn cDNA sequence plant transformation

IT Stress, plant  
(cold, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant  
(heat, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Recombination, genetic  
(homologous, improved rate of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Cell cycle  
(improved growth rate by manipulation of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Proteins  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
(improved production of seed; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Growth regulators, plant  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)  
(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Fats and Glyceridic oils, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Pathogen  
(improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Carbohydrates, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(improved use and/or uptake of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Disease resistance, plant  
Growth and development, plant  
Herbicide resistance  
Photosynthesis, biological  
(improvement of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Embryophyta  
Protein sequences  
Transformation, genetic  
*Zea mays*  
cDNA sequences  
(nucleic acid mols. and encoded proteins associated with maize and their

uses for plant improvement)

IT Proteins

cDNA

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Transcription factors

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant

(osmotic, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT Stress, plant

(water deficiency, improved tolerance to; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809276-33-3	809276-34-4	809276-35-5	809276-36-6	809276-37-7
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809773-03-3 809773-05-5 809773-06-6 809773-07-7 809773-08-8  
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809775-74-4 809775-75-5 809775-76-6 809775-78-8 809775-79-9

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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809778-52-7 809778-53-8 809778-55-0 809778-56-1 809778-57-2  
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809779-30-4	809779-31-5	809779-33-7	809779-34-8	809779-35-9
809779-36-0	809779-37-1	809779-39-3	809779-40-6	809779-41-7
809779-42-8	809779-44-0	809779-45-1	809779-46-2	809779-47-3
809779-48-4	809779-50-8	809779-51-9	809779-52-0	809779-53-1
809779-54-2	809779-56-4	809779-57-5	809779-58-6	809779-59-7
809779-60-0	809779-62-2	809779-63-3	809779-64-4	809779-65-5
809779-66-6	809779-68-8	809779-69-9	809779-70-2	809779-71-3
809779-73-5	809779-74-6	809779-75-7	809779-76-8	809779-78-0
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809779-85-9	809779-86-0	809779-87-1	809779-88-2	809779-90-6
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809779-97-3	809779-98-4	809779-99-5	809780-01-6	809780-02-7
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809780-46-9	809780-47-0	809780-48-1	809780-49-2	809780-50-5
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809780-58-3	809780-59-4	809780-60-7	809780-61-8	809780-63-0
809780-64-1	809780-65-2	809780-66-3	809780-67-4	809780-68-5
809780-69-6	809780-70-9	809780-71-0	809780-72-1	809780-73-2
809780-75-4	809780-76-5	809780-77-6	809780-78-7	809780-80-1
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809780-87-8	809780-88-9	809780-89-0	809780-91-4	809780-92-5
809780-93-6	809780-94-7	809780-95-8	809780-97-0	809780-98-1
809780-99-2	809781-00-8	809781-02-0	809781-03-1	809781-04-2
809781-05-3	809781-06-4	809781-08-6	809781-09-7	809781-10-0
809781-11-1	809781-13-3	809781-14-4	809781-15-5	809781-16-6
809781-17-7	809781-19-9	809781-20-2	809781-21-3	809781-22-4
809781-23-5	809781-25-7	809781-26-8	809781-27-9	809781-28-0
809781-30-4	809781-31-5	809781-32-6	809781-33-7	809781-35-9

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809781-36-0	809781-37-1	809781-38-2	809781-39-3	809781-41-7
	809781-42-8	809781-43-9	809781-44-0	809781-46-2	809781-47-3
	809781-48-4	809781-49-5	809781-51-9	809781-52-0	809781-53-1
	809781-54-2	809781-55-3	809781-57-5	809781-58-6	809781-59-7
	809781-60-0	809781-62-2	809781-63-3	809781-64-4	809781-65-5
	809781-67-7	809781-68-8	809781-69-9	809781-70-2	809781-71-3
	809781-73-5	809781-74-6	809781-75-7	809781-76-8	809781-77-9
	809781-79-1	809781-80-4	809781-81-5	809781-82-6	809781-84-8
	809781-85-9	809781-86-0	809781-87-1	809781-88-2	809781-90-6
	809781-91-7	809781-92-8	809781-93-9	809781-95-1	809781-96-2
	809781-97-3	809781-98-4	809781-99-5	809782-01-2	809782-02-3
	809782-03-4	809782-04-5	809782-05-6	809782-07-8	809782-08-9
	809782-09-0	809782-10-3	809782-12-5	809782-13-6	809782-14-7
	809782-15-8	809782-16-9	809782-18-1	809782-19-2	809782-20-5
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	809782-27-2	809782-29-4	809782-30-7	809782-31-8	809782-32-9
	809782-33-0	809782-35-2	809782-36-3	809782-37-4	809782-38-5
	809782-39-6	809782-41-0	809782-42-1	809782-43-2	809782-44-3
	809782-46-5	809782-47-6	809782-48-7	809782-49-8	809782-51-2
	809782-52-3	809782-53-4	809782-54-5	809782-55-6	809782-57-8
	809782-58-9	809782-59-0	809782-60-3	809782-62-5	809782-63-6

809782-64-7	809782-65-8	809782-66-9	809782-68-1	809782-69-2
809782-70-5	809782-71-6	809782-73-8	809782-74-9	809782-75-0
809782-76-1	809782-78-3	809782-79-4	809782-80-7	809782-82-9
809782-83-0	809782-84-1	809782-85-2	809782-87-4	809782-88-5
809782-89-6	809782-90-9	809782-91-0	809782-92-1	809782-93-2
809782-94-3	809782-95-4	809782-97-6	809782-98-7	809782-99-8
809783-00-4	809783-02-6	809783-03-7	809783-04-8	809783-05-9
809783-07-1	809783-08-2	809783-09-3	809783-10-6	809783-11-7
809783-13-9	809783-14-0	809783-15-1	809783-16-2	809783-18-4
809783-19-5	809783-20-8	809783-21-9	809783-23-1	809783-24-2
809783-25-3	809783-26-4	809783-27-5	809783-29-7	809783-30-0
809783-31-1	809783-32-2	809783-33-3	809783-35-5	809783-36-6
809783-37-7	809783-38-8	809783-40-2	809783-41-3	809783-42-4
809783-43-5	809783-45-7	809783-46-8	809783-47-9	809783-48-0
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809783-56-0	809783-57-1	809783-58-2	809783-59-3	809783-61-7
809783-62-8	809783-63-9	809783-64-0	809783-66-2	809783-67-3
809783-68-4	809783-69-5	809783-71-9	809783-72-0	809783-73-1
809783-74-2	809783-75-3	809783-77-5	809783-78-6	809783-79-7
809783-81-1	809783-82-2	809783-83-3	809783-84-4	809783-85-5
809783-87-7	809783-88-8	809783-89-9	809783-90-2	809783-92-4
809783-93-5	809783-94-6	809783-95-7	809783-97-9	809783-98-0
809783-99-1	809784-00-7	809784-02-9	809784-03-0	809784-04-1
809784-05-2	809784-07-4	809784-08-5	809784-09-6	809784-10-9
809784-12-1	809784-13-2	809784-14-3	809784-15-4	809784-17-6
809784-18-7	809784-19-8	809784-20-1	809784-22-3	809784-23-4

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809784-24-5	809784-25-6	809784-27-8	809784-28-9	809784-29-0
	809784-30-3	809784-32-5	809784-33-6	809784-34-7	809784-35-8
	809784-37-0	809784-38-1	809784-39-2	809784-40-5	809784-41-6
	809784-43-8	809784-44-9	809784-45-0	809784-46-1	809784-48-3
	809784-49-4	809784-50-7	809784-51-8	809784-53-0	809784-54-1
	809784-55-2	809784-56-3	809784-57-4	809784-59-6	809784-60-9
	809784-61-0	809784-62-1	809784-64-3	809784-65-4	809784-66-5
	809784-67-6	809784-69-8	809784-70-1	809784-71-2	809784-72-3
	809784-74-5	809784-75-6	809784-76-7	809784-77-8	809784-79-0
	809784-80-3	809784-81-4	809784-82-5	809784-84-7	809784-85-8
	809784-86-9	809784-87-0	809784-89-2	809784-90-5	809784-91-6
	809784-92-7	809784-94-9	809784-95-0	809784-96-1	809784-97-2
	809784-99-4	809785-00-0	809785-01-1	809785-02-2	809785-04-4
	809785-05-5	809785-06-6	809785-07-7	809785-09-9	809785-10-2
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	809785-17-9	809785-19-1	809785-20-4	809785-21-5	809785-22-6
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	809785-30-6	809785-32-8	809785-33-9	809785-34-0	809785-35-1
	809785-37-3	809785-38-4	809785-39-5	809785-40-8	809785-42-0
	809785-43-1	809785-44-2	809785-45-3	809785-47-5	809785-48-6
	809785-49-7	809785-50-0	809785-52-2	809785-53-3	809785-54-4
	809785-55-5	809785-57-7	809785-58-8	809785-59-9	809785-60-2
	809785-62-4	809785-63-5	809785-64-6	809785-65-7	809785-67-9
	809785-68-0	809785-69-1	809785-70-4	809785-72-6	809785-73-7
	809785-74-8	809785-75-9	809785-77-1	809785-78-2	809785-79-3
	809785-80-6	809785-82-8	809785-83-9	809785-84-0	809785-85-1
	809785-87-3	809785-88-4	809785-89-5	809785-90-8	809785-92-0
	809785-93-1	809785-94-2	809785-95-3	809785-97-5	809785-98-6
	809785-99-7	809786-00-3	809786-02-5	809786-03-6	809786-04-7
	809786-05-8	809786-07-0	809786-08-1	809786-09-2	809786-10-5
	809786-12-7	809786-13-8	809786-14-9	809786-16-1	809786-17-2

809786-18-3	809786-19-4	809786-21-8	809786-22-9	809786-23-0
809786-24-1	809786-26-3	809786-27-4	809786-28-5	809786-29-6
809786-31-0	809786-32-1	809786-33-2	809786-35-4	809786-36-5
809786-37-6	809786-38-7	809786-40-1	809786-41-2	809786-42-3
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809786-50-3	809786-51-4	809786-52-5	809786-54-7	809786-55-8
809786-56-9	809786-57-0	809786-59-2	809786-60-5	809786-61-6
809786-62-7	809786-64-9	809786-65-0	809786-66-1	809786-68-3
809786-69-4	809786-70-7	809786-71-8	809786-73-0	809786-74-1
809786-75-2	809786-76-3	809786-78-5	809786-79-6	809786-80-9
809786-82-1	809786-83-2	809786-84-3	809786-85-4	809786-87-6
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809787-06-2	809787-08-4	809787-09-5	809787-10-8	809787-11-9
809787-13-1	809787-14-2	809787-15-3	809787-16-4	809787-18-6

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809787-19-7	809787-20-0	809787-21-1	809787-23-3	809787-24-4
	809787-25-5	809787-27-7	809787-28-8	809787-29-9	809787-30-2
	809787-32-4	809787-33-5	809787-34-6	809787-35-7	809787-37-9
	809787-38-0	809787-39-1	809787-40-4	809787-42-6	809787-43-7
	809787-44-8	809787-46-0	809787-47-1	809787-48-2	809787-49-3
	809787-51-7	809787-52-8	809787-53-9	809787-55-1	809787-56-2
	809787-57-3	809787-58-4	809787-60-8	809787-61-9	809787-62-0
	809787-64-2	809787-65-3	809787-66-4	809787-68-6	809787-69-7
	809787-70-0	809787-72-2	809787-73-3	809787-74-4	809787-76-6
	809787-77-7	809787-78-8	809787-79-9	809787-81-3	809787-82-4
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	809788-35-0	809788-37-2	809788-38-3	809788-39-4	809788-40-7
	809788-42-9	809788-43-0	809788-44-1	809788-46-3	809788-47-4
	809788-48-5	809788-49-6	809788-51-0	809788-52-1	809788-53-2
	809788-54-3	809788-56-5	809788-57-6	809788-58-7	809788-60-1
	809788-61-2	809788-62-3	809788-63-4	809788-65-6	809788-66-7
	809788-67-8	809788-69-0	809788-70-3	809788-71-4	809788-73-6
	809788-74-7	809788-75-8	809788-77-0	809788-78-1	809788-79-2
	809788-81-6	809788-82-7	809788-83-8	809788-92-9	809788-93-0
	809788-94-1	809788-96-3	809788-97-4	809788-98-5	809788-99-6
	809789-01-3	809789-02-4	809789-03-5	809789-05-7	809789-06-8
	809789-07-9	809789-08-0	809789-10-4	809789-11-5	809789-12-6
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	809789-20-6	809789-21-7	809789-23-9	809789-24-0	809789-25-1
	809789-27-3	809789-28-4	809789-29-5	809789-30-8	809789-32-0
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	809789-46-6	809789-47-7	809789-49-9	809789-50-2	809789-51-3
	809789-53-5	809789-54-6	809789-55-7	809789-56-8	809789-58-0
	809789-59-1	809789-60-4	809789-62-6	809789-63-7	809789-64-8
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	809789-79-5	809789-80-8	809789-82-0	809789-83-1	809789-84-2
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809789-92-2 809789-93-3 809789-94-4 809789-96-6 809789-97-7  
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 809790-05-4 809790-06-5 809790-07-6 809790-09-8 809790-10-1  
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 809790-24-7 809790-25-8 809790-27-0 809790-28-1 809790-29-2

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809790-31-6 809790-32-7 809790-35-0 809790-36-1 809790-37-2  
 809790-38-3 809790-40-7 809790-43-0 809790-45-2 809790-46-3  
 809790-47-4 809790-48-5 809790-50-9 809790-51-0 809790-52-1  
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 809792-62-9 809792-63-0 809792-64-1 809792-65-2 809792-67-4  
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 809793-10-0 809793-11-1 809793-13-3 809793-14-4 809793-15-5  
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 809793-23-5 809793-25-7 809793-26-8 809793-27-9 809793-29-1  
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 809793-37-1 809793-38-2 809793-39-3 809793-41-7 809793-42-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809793-43-9	809793-44-0	809793-46-2	809793-47-3	809793-48-4
	809793-50-8	809793-51-9	809793-52-0	809793-54-2	809793-55-3
	809793-56-4	809793-58-6	809793-59-7	809793-60-0	809793-62-2
	809793-63-3	809793-64-4	809793-65-5	809793-66-6	809793-67-7
	809793-68-8	809793-69-9	809793-70-2	809793-71-3	809793-72-4
	809793-73-5	809793-74-6	809793-75-7	809793-76-8	809793-77-9
	809793-78-0	809793-79-1	809793-80-4	809793-81-5	809793-82-6
	809793-83-7	809793-84-8	809793-85-9	809793-86-0	809793-87-1
	809793-88-2	809793-89-3	809793-90-6	809793-91-7	809793-92-8
	809793-93-9	809793-94-0	809793-95-1	809793-96-2	809793-97-3
	809793-98-4	809793-99-5	809794-00-1	809794-01-2	809794-02-3
	809794-03-4	809794-04-5	809794-05-6	809794-06-7	809794-07-8
	809794-08-9	809794-09-0	809794-10-3	809794-11-4	809794-12-5
	809794-13-6	809794-14-7	809794-15-8	809794-16-9	809794-17-0
	809794-18-1	809794-19-2	809794-20-5	809794-21-6	809794-22-7
	809794-23-8	809794-24-9	809794-25-0	809794-26-1	809794-27-2
	809794-28-3	809794-29-4	809794-30-7	809794-31-8	809794-32-9
	809794-33-0	809794-34-1	809794-35-2	809794-36-3	809794-37-4
	809794-38-5	809794-39-6	809794-40-9	809794-41-0	809794-42-1
	809794-43-2	809794-44-3	809794-45-4	809794-46-5	809794-47-6
	809794-48-7	809794-49-8	809794-50-1	809794-51-2	809794-52-3
	809794-53-4	809794-54-5	809794-55-6	809794-56-7	809794-57-8
	809794-58-9	809794-59-0	809794-60-3	809794-61-4	809794-62-5
	809794-63-6	809794-64-7	809794-65-8	809794-66-9	809794-67-0
	809794-68-1	809794-69-2	809794-70-5	809794-71-6	809794-72-7
	809794-73-8	809794-74-9	809794-75-0	809794-76-1	809794-77-2
	809794-78-3	809794-79-4	809794-80-7	809794-81-8	809794-82-9
	809794-83-0	809794-84-1	809794-85-2	809794-86-3	809794-87-4
	809794-88-5	809794-89-6	809794-90-9	809794-91-0	809794-92-1
	809794-93-2	809794-94-3	809794-95-4	809794-96-5	809794-97-6
	809794-98-7	809794-99-8	809795-00-4	809795-01-5	809795-02-6
	809795-03-7	809795-04-8	809795-05-9	809795-06-0	809795-07-1
	809795-08-2	809795-09-3	809795-10-6	809795-11-7	809795-12-8
	809795-13-9	809795-14-0	809795-15-1	809795-16-2	809795-17-3
	809795-18-4	809795-19-5	809795-20-8	809795-21-9	809795-22-0
	809795-23-1	809795-24-2	809795-25-3	809795-26-4	809795-27-5
	809795-28-6	809795-29-7	809795-30-0	809795-31-1	809795-32-2
	809795-33-3	809795-34-4	809795-35-5	809795-36-6	809795-37-7
	809795-38-8	809795-39-9	809795-40-2	809795-41-3	809795-42-4
	809795-43-5	809795-44-6	809795-45-7	809795-46-8	809795-47-9
	809795-48-0	809795-49-1	809795-50-4	809795-51-5	809795-52-6
	809795-53-7	809795-54-8	809795-55-9	809795-56-0	809795-57-1
	809795-58-2	809795-59-3	809795-60-6	809795-61-7	809795-62-8
	809795-63-9	809795-64-0	809795-65-1	809795-66-2	809795-67-3
	809795-68-4	809795-69-5	809795-70-8	809795-71-9	809795-72-0
	809795-73-1	809795-74-2	809795-75-3	809795-76-4	809795-77-5
	809795-78-6	809795-79-7	809795-80-0	809795-81-1	809795-82-2
	RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)				
IT	809795-83-3	809795-84-4	809795-85-5	809795-86-6	809795-87-7
	809795-88-8	809795-89-9	809795-90-2	809795-91-3	809795-92-4
	809795-93-5	809795-94-6	809795-95-7	809795-96-8	809795-97-9
	809795-98-0	809795-99-1	809796-00-7	809796-01-8	809796-02-9
	809796-03-0	809796-04-1	809796-05-2	809796-06-3	809796-07-4
	809796-08-5	809796-09-6	809796-10-9	809796-11-0	809796-12-1
	809796-13-2	809796-14-3	809796-15-4	809796-16-5	809796-17-6
	809796-18-7	809796-19-8	809796-20-1	809796-21-2	809796-22-3
	809796-23-4	809796-24-5	809796-25-6	809796-26-7	809796-27-8
	809796-28-9	809796-29-0	809796-30-3	809796-31-4	809796-32-5

809796-33-6	809796-34-7	809796-35-8	809796-36-9	809796-37-0
809796-38-1	809796-39-2	809796-40-5	809796-41-6	809796-42-7
809796-43-8	809796-44-9	809796-45-0	809796-46-1	809796-47-2
809796-48-3	809796-49-4	809796-50-7	809796-51-8	809796-52-9
809796-53-0	809796-54-1	809796-55-2	809796-56-3	809796-57-4
809796-58-5	809796-59-6	809796-60-9	809796-61-0	809796-62-1
809796-63-2	809796-64-3	809796-65-4	809796-66-5	809796-67-6
809796-68-7	809796-69-8	809796-70-1	809796-71-2	809796-72-3
809796-73-4	809796-74-5	809796-75-6	809796-76-7	809796-77-8
809796-78-9	809796-79-0	809796-80-3	809796-81-4	809796-82-5
809796-83-6	809796-84-7	809796-85-8	809796-86-9	809796-87-0
809796-88-1	809796-89-2	809796-90-5	809796-91-6	809796-92-7
809796-93-8	809796-94-9	809796-95-0	809796-96-1	809796-97-2
809796-98-3	809796-99-4	809797-00-0	809797-01-1	809797-02-2
809797-03-3	809797-04-4	809797-05-5	809797-06-6	809797-07-7
809797-08-8	809797-09-9	809797-10-2	809797-11-3	809797-12-4
809797-13-5	809797-14-6	809797-15-7	809797-16-8	809797-17-9
809797-18-0	809797-19-1	809797-20-4	809797-21-5	809797-22-6
809797-23-7	809797-24-8	809797-25-9	809797-26-0	809797-27-1
809797-28-2	809797-29-3	809797-30-6	809797-31-7	809797-32-8
809797-33-9	809797-34-0	809797-35-1	809797-36-2	809797-37-3
809797-38-4	809797-39-5	809797-40-8	809797-41-9	809797-42-0
809797-43-1	809797-44-2	809797-45-3	809797-46-4	809797-47-5
809797-48-6	809797-49-7	809797-50-0	809797-51-1	809797-52-2
809797-53-3	809797-54-4	809797-55-5	809797-56-6	809797-57-7
809797-58-8	809797-59-9	809797-60-2	809797-61-3	809797-62-4
809797-63-5	809797-64-6	809797-65-7	809797-66-8	809797-67-9
809797-68-0	809797-69-1	809797-70-4	809797-71-5	809797-72-6
809797-73-7	809797-74-8	809797-75-9	809797-76-0	809797-77-1
809797-78-2	809797-79-3	809797-80-6	809797-81-7	809797-82-8
809797-83-9	809797-84-0	809797-85-1	809797-86-2	809797-87-3
809797-88-4	809797-89-5	809797-90-8	809797-91-9	809797-92-0
809797-93-1	809797-94-2	809797-95-3	809797-96-4	809797-97-5
809797-98-6	809797-99-7	809798-00-3	809798-01-4	809798-02-5
809798-03-6	809798-04-7	809798-05-8	809798-06-9	809798-07-0
809798-08-1	809798-09-2	809798-10-5	809798-11-6	809798-12-7
809798-13-8	809798-14-9	809798-15-0	809798-16-1	809798-17-2

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809798-18-3	809798-19-4	809798-20-7	809798-21-8	809798-22-9
	809798-23-0	809798-24-1	809798-25-2	809798-26-3	809798-27-4
	809798-28-5	809798-29-6	809798-30-9	809798-31-0	809798-32-1
	809798-33-2	809798-34-3	809798-35-4	809798-36-5	809798-37-6
	809798-38-7	809798-39-8	809798-40-1	809798-41-2	809798-42-3
	809798-43-4	809798-44-5	809798-45-6	809798-46-7	809798-47-8
	809798-48-9	809798-49-0	809798-50-3	809798-51-4	809798-52-5
	809798-53-6	809798-54-7	809798-55-8	809798-56-9	809798-57-0
	809798-58-1	809798-59-2	809798-60-5	809798-61-6	809798-62-7
	809798-63-8	809798-64-9	809798-65-0	809798-66-1	809798-67-2
	809798-68-3	809798-69-4	809798-70-7	809798-71-8	809798-72-9
	809798-73-0	809798-74-1	809798-75-2	809798-76-3	809798-77-4
	809798-78-5	809798-79-6	809798-80-9	809798-81-0	809798-82-1
	809798-83-2	809798-84-3	809798-85-4	809798-86-5	809798-87-6
	809798-88-7	809798-89-8	809798-90-1	809798-91-2	809798-92-3
	809798-93-4	809798-94-5	809798-95-6	809798-96-7	809798-97-8
	809798-98-9	809798-99-0	809799-00-6	809799-01-7	809799-02-8
	809799-03-9	809799-04-0	809799-05-1	809799-06-2	809799-07-3
	809799-08-4	809799-09-5	809799-10-8	809799-11-9	809799-12-0
	809799-13-1	809799-14-2	809799-15-3	809799-16-4	809799-17-5

809799-18-6	809799-19-7	809799-20-0	809799-21-1	809799-22-2
809799-23-3	809799-24-4	809799-25-5	809799-26-6	809799-27-7
809799-28-8	809799-29-9	809799-30-2	809799-31-3	809799-32-4
809799-33-5	809799-34-6	809799-35-7	809799-36-8	809799-37-9
809799-38-0	809799-39-1	809799-40-4	809799-41-5	809799-42-6
809799-43-7	809799-44-8	809799-45-9	809799-46-0	809799-47-1
809799-48-2	809799-49-3	809799-50-6	809799-51-7	809799-52-8
809799-53-9	809799-54-0	809799-55-1	809799-56-2	809799-57-3
809799-58-4	809799-59-5	809799-60-8	809799-61-9	809799-62-0
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809799-68-6	809799-69-7	809799-70-0	809799-71-1	809799-72-2
809799-73-3	809799-74-4	809799-75-5	809799-76-6	809799-77-7
809799-78-8	809799-79-9	809799-80-2	809799-81-3	809799-82-4
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809799-93-7	809799-94-8	809799-95-9	809799-96-0	809799-97-1
809799-98-2	809799-99-3	809800-00-8	809800-01-9	809800-02-0
809800-03-1	809800-04-2	809800-05-3	809800-06-4	809800-07-5
809800-08-6	809800-09-7	809800-10-0	809800-11-1	809800-12-2
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809800-18-8	809800-19-9	809800-20-2	809800-21-3	809800-22-4
809800-23-5	809800-24-6	809800-25-7	809800-26-8	809800-27-9
809800-28-0	809800-29-1	809800-30-4	809800-31-5	809800-32-6
809800-33-7	809800-34-8	809800-35-9	809800-36-0	809800-37-1
809800-38-2	809800-39-3	809800-40-6	809800-41-7	809800-42-8
809800-43-9	809800-44-0	809800-45-1	809800-46-2	809800-47-3
809800-48-4	809800-49-5	809800-50-8	809800-51-9	809800-52-0

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809800-53-1	809800-54-2	809800-55-3	809800-56-4	809800-57-5
	809800-58-6	809800-59-7	809800-60-0	809800-61-1	809800-62-2
	809800-63-3	809800-64-4	809800-65-5	809800-66-6	809800-67-7
	809800-68-8	809800-69-9	809800-70-2	809800-71-3	809800-72-4
	809800-73-5	809800-74-6	809800-75-7	809800-76-8	809800-77-9
	809800-78-0	809800-79-1	809800-80-4	809800-81-5	809800-82-6
	809800-83-7	809800-84-8	809800-85-9	809800-86-0	809800-87-1
	809800-88-2	809800-89-3	809800-90-6	809800-91-7	809800-92-8
	809800-93-9	809800-94-0	809800-95-1	809800-96-2	809800-97-3
	809800-98-4	809800-99-5	809801-00-1	809801-01-2	809801-02-3
	809801-03-4	809801-04-5	809801-05-6	809801-06-7	809801-07-8
	809801-08-9	809801-09-0	809801-10-3	809801-11-4	809801-12-5
	809801-13-6	809801-14-7	809801-15-8	809801-16-9	809801-17-0
	809801-18-1	809801-19-2	809801-20-5	809801-21-6	809801-22-7
	809801-23-8	809801-24-9	809801-25-0	809801-26-1	809801-27-2
	809801-28-3	809801-29-4	809801-30-7	809801-31-8	809801-32-9
	809801-33-0	809801-34-1	809801-35-2	809801-36-3	809801-37-4
	809801-38-5	809801-39-6	809801-40-9	809801-41-0	809801-42-1
	809801-43-2	809801-44-3	809801-45-4	809801-46-5	809801-47-6
	809801-48-7	809801-49-8	809801-50-1	809801-51-2	809801-52-3
	809801-53-4	809801-54-5	809801-55-6	809801-56-7	809801-57-8
	809801-58-9	809801-59-0	809801-60-3	809801-61-4	809801-62-5
	809801-63-6	809801-64-7	809801-65-8	809801-66-9	809801-67-0
	809801-68-1	809801-69-2	809801-70-5	809801-71-6	809801-72-7
	809801-73-8	809801-74-9	809801-75-0	809801-76-1	809801-77-2
	809801-78-3	809801-79-4	809801-80-7	809801-81-8	809801-82-9
	809801-83-0	809801-84-1	809801-85-2	809801-86-3	809801-87-4
	809801-88-5	809801-89-6	809801-90-9	809801-91-0	809801-92-1
	809801-93-2	809801-94-3	809801-95-4	809801-96-5	809801-97-6
	809801-98-7	809801-99-8	809802-00-4	809802-01-5	809802-02-6

809802-03-7	809802-04-8	809802-05-9	809802-06-0	809802-07-1
809802-08-2	809802-09-3	809802-10-6	809802-11-7	809802-12-8
809802-13-9	809802-14-0	809802-15-1	809802-16-2	809802-17-3
809802-18-4	809802-19-5	809802-20-8	809802-21-9	809802-22-0
809802-23-1	809802-24-2	809802-25-3	809802-26-4	809802-27-5
809802-28-6	809802-29-7	809802-30-0	809802-31-1	809802-32-2
809802-33-3	809802-34-4	809802-35-5	809802-36-6	809802-37-7
809802-38-8	809802-39-9	809802-40-2	809802-41-3	809802-42-4
809802-43-5	809802-44-6	809802-45-7	809802-46-8	809802-47-9
809802-48-0	809802-49-1	809802-50-4	809802-51-5	809802-52-6
809802-53-7	809802-54-8	809802-55-9	809802-56-0	809802-57-1
809802-58-2	809802-59-3	809802-60-6	809802-61-7	809802-62-8
809802-63-9	809802-64-0	809802-65-1	809802-66-2	809802-67-3
809802-68-4	809802-69-5	809802-70-8	809802-71-9	809802-72-0
809802-73-1	809802-74-2	809802-75-3	809802-76-4	809802-77-5
809802-78-6	809802-79-7	809802-80-0	809802-81-1	809802-82-2
809802-83-3	809802-84-4	809802-85-5	809802-86-6	809802-87-7

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809802-88-8	809802-89-9	809802-90-2	809802-91-3	809802-92-4
	809802-93-5	809802-94-6	809802-95-7	809802-96-8	809802-97-9
	809802-98-0	809802-99-1	809803-00-7	809803-01-8	809803-02-9
	809803-03-0	809803-04-1	809803-05-2	809803-06-3	809803-07-4
	809803-08-5	809803-09-6	809803-10-9	809803-11-0	809803-12-1
	809803-13-2	809803-14-3	809803-15-4	809803-16-5	809803-17-6
	809803-18-7	809803-19-8	809803-20-1	809803-21-2	809803-22-3
	809803-23-4	809803-24-5	809803-25-6	809803-26-7	809803-27-8
	809803-28-9	809803-29-0	809803-30-3	809803-31-4	809803-32-5
	809803-33-6	809803-34-7	809803-35-8	809803-36-9	809803-37-0
	809803-38-1	809803-39-2	809803-40-5	809803-41-6	809803-42-7
	809803-43-8	809803-44-9	809803-45-0	809803-46-1	809803-47-2
	809803-48-3	809803-49-4	809803-50-7	809803-51-8	809803-52-9
	809803-53-0	809803-54-1	809803-55-2	809803-56-3	809803-57-4
	809803-58-5	809803-59-6	809803-60-9	809803-61-0	809803-62-1
	809803-63-2	809803-64-3	809803-65-4	809803-66-5	809803-67-6
	809803-68-7	809803-69-8	809803-70-1	809803-71-2	809803-72-3
	809803-73-4	809803-74-5	809803-75-6	809803-76-7	809803-77-8
	809803-78-9	809803-79-0	809803-80-3	809803-81-4	809803-82-5
	809803-83-6	809803-84-7	809803-85-8	809803-86-9	809803-87-0
	809803-88-1	809803-89-2	809803-90-5	809803-91-6	809803-92-7
	809803-93-8	809803-94-9	809803-95-0	809803-96-1	809803-97-2
	809803-98-3	809803-99-4	809804-00-0	809804-01-1	809804-02-2
	809804-03-3	809804-04-4	809804-05-5	809804-06-6	809804-07-7
	809804-08-8	809804-09-9	809804-10-2	809804-11-3	809804-12-4
	809804-13-5	809804-14-6	809804-15-7	809804-16-8	809804-17-9
	809804-18-0	809804-19-1	809804-20-4	809804-21-5	809804-22-6
	809804-23-7	809804-24-8	809804-25-9	809804-26-0	809804-27-1
	809804-28-2	809804-29-3	809804-30-6	809804-31-7	809804-32-8
	809804-33-9	809804-34-0	809804-35-1	809804-36-2	809804-37-3
	809804-38-4	809804-39-5	809804-40-8	809804-41-9	809804-42-0
	809804-43-1	809804-44-2	809804-45-3	809804-46-4	809804-47-5
	809804-48-6	809804-49-7	809804-50-0	809804-51-1	809804-52-2
	809804-53-3	809804-54-4	809804-55-5	809804-56-6	809804-57-7
	809804-58-8	809804-59-9	809804-60-2	809804-61-3	809804-62-4
	809804-63-5	809804-64-6	809804-65-7	809804-66-8	809804-67-9
	809804-68-0	809804-69-1	809804-70-4	809804-71-5	809804-72-6
	809804-73-7	809804-74-8	809804-75-9	809804-76-0	809804-77-1
	809804-78-2	809804-79-3	809804-80-6	809804-81-7	809804-82-8
	809804-83-9	809804-84-0	809804-85-1	809804-86-2	809804-87-3

809804-88-4 809804-89-5 809804-90-8 809804-91-9 809804-92-0  
 809804-93-1 809804-94-2 809804-95-3 809804-96-4 809804-97-5  
 809804-98-6 809804-99-7 809805-00-3 809805-01-4 809805-02-5  
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 809805-08-1 809805-09-2 809805-10-5 809805-11-6 809805-12-7  
 809805-13-8 809805-14-9 809805-15-0 809805-16-1 809805-17-2  
 809805-18-3 809805-19-4 809805-20-7 809805-21-8 809805-22-9

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809805-23-0 809805-24-1 809805-25-2 809805-26-3 809805-27-4  
 809805-28-5 809805-29-6 809805-30-9 809805-31-0 809805-32-1  
 809805-33-2 809805-34-3 809805-35-4 809805-36-5 809805-37-6  
 809805-38-7 809805-39-8 809805-40-1 809805-41-2 809805-42-3  
 809805-43-4 809805-44-5 809805-45-6 809805-46-7 809805-47-8  
 809805-48-9 809805-49-0 809805-50-3 809805-51-4 809805-52-5  
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 809807-48-5 809807-49-6 809807-50-9 809807-51-0 809807-52-1  
 809807-53-2 809807-54-3 809807-55-4 809807-56-5 809807-57-6

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated

with maize and their uses for plant improvement)

IT	809807-58-7	809807-59-8	809807-60-1	809807-61-2	809807-62-3
	809807-63-4	809807-64-5	809807-65-6	809807-66-7	809807-67-8
	809807-68-9	809807-69-0	809807-70-3	809807-71-4	809807-72-5
	809807-73-6	809807-74-7	809807-75-8	809807-76-9	809807-77-0
	809807-78-1	809807-79-2	809807-80-5	809807-81-6	809807-82-7
	809807-83-8	809807-84-9	809807-85-0	809807-86-1	809807-87-2
	809807-88-3	809807-89-4	809807-90-7	809807-91-8	809807-92-9
	809807-93-0	809807-94-1	809807-95-2	809807-96-3	809807-97-4
	809807-98-5	809807-99-6	809808-00-2	809808-01-3	809808-02-4
	809808-03-5	809808-04-6	809808-05-7	809808-06-8	809808-07-9
	809808-08-0	809808-09-1	809808-10-4	809808-11-5	809808-12-6
	809808-13-7	809808-14-8	809808-15-9	809808-16-0	809808-17-1
	809808-18-2	809808-19-3	809808-20-6	809808-21-7	809808-22-8
	809808-23-9	809808-24-0	809808-25-1	809808-26-2	809808-27-3
	809808-28-4	809808-29-5	809808-30-8	809808-31-9	809808-32-0
	809808-33-1	809808-34-2	809808-35-3	809808-36-4	809808-37-5
	809808-38-6	809808-39-7	809808-40-0	809808-41-1	809808-42-2
	809808-43-3	809808-44-4	809808-45-5	809808-46-6	809808-47-7
	809808-48-8	809808-49-9	809808-50-2	809808-51-3	809808-52-4
	809808-53-5	809808-54-6	809808-55-7	809808-56-8	809808-57-9
	809808-58-0	809808-59-1	809808-60-4	809808-61-5	809808-62-6
	809808-63-7	809808-64-8	809808-65-9	809808-66-0	809808-67-1
	809808-68-2	809808-69-3	809808-70-6	809808-71-7	809808-72-8
	809808-73-9	809808-74-0	809808-75-1	809808-76-2	809808-77-3
	809808-78-4	809808-79-5	809808-80-8	809808-81-9	809808-82-0
	809808-83-1	809808-84-2	809808-85-3	809808-86-4	809808-87-5
	809808-88-6	809808-89-7	809808-90-0	809808-91-1	809808-92-2
	809808-93-3	809808-94-4	809808-95-5	809808-96-6	809808-97-7
	809808-98-8	809808-99-9	809809-00-5	809809-01-6	809809-02-7
	809809-03-8	809809-04-9	809809-05-0	809809-06-1	809809-07-2
	809809-08-3	809809-09-4	809809-10-7	809809-11-8	809809-12-9
	809809-13-0	809809-14-1	809809-15-2	809809-16-3	809809-17-4
	809809-18-5	809809-19-6	809809-20-9	809809-21-0	809809-22-1
	809809-23-2	809809-24-3	809809-25-4	809809-26-5	809809-27-6
	809809-28-7	809809-29-8	809809-30-1	809809-31-2	809809-32-3
	809809-33-4	809809-34-5	809809-35-6	809809-36-7	809809-37-8
	809809-38-9	809809-39-0	809809-40-3	809809-41-4	809809-42-5
	809809-43-6	809809-44-7	809809-45-8	809809-46-9	809809-47-0
	809809-48-1	809809-49-2	809809-50-5	809809-51-6	809809-52-7
	809809-53-8	809809-54-9	809809-55-0	809809-56-1	809809-57-2
	809809-58-3	809809-59-4	809809-60-7	809809-61-8	809809-62-9
	809809-63-0	809809-64-1	809809-65-2	809809-66-3	809809-67-4
	809809-68-5	809809-69-6	809809-70-9	809809-71-0	809809-72-1
	809809-73-2	809809-74-3	809809-75-4	809809-76-5	809809-77-6
	809809-78-7	809809-79-8	809809-80-1	809809-81-2	809809-82-3
	809809-83-4	809809-84-5	809809-85-6	809809-86-7	809809-87-8
	809809-88-9	809809-89-0	809809-90-3	809809-91-4	809809-92-5

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809809-93-6	809809-94-7	809809-95-8	809809-96-9	809809-97-0
	809809-98-1	809809-99-2	809810-00-2	809810-01-3	809810-02-4
	809810-03-5	809810-04-6	809810-05-7	809810-06-8	809810-07-9
	809810-08-0	809810-09-1	809810-10-4	809810-11-5	809810-12-6
	809810-13-7	809810-14-8	809810-15-9	809810-16-0	809810-17-1
	809810-18-2	809810-19-3	809810-20-6	809810-21-7	809810-22-8
	809810-23-9	809810-24-0	809810-25-1	809810-26-2	809810-27-3
	809810-28-4	809810-29-5	809810-30-8	809810-31-9	809810-32-0
	809810-33-1	809810-34-2	809810-35-3	809810-36-4	809810-37-5

809810-38-6	809810-39-7	809810-40-0	809810-41-1	809810-42-2
809810-43-3	809810-44-4	809810-45-5	809810-46-6	809810-47-7
809810-48-8	809810-49-9	809810-50-2	809810-51-3	809810-52-4
809810-53-5	809810-54-6	809810-55-7	809810-56-8	809810-57-9
809810-58-0	809810-59-1	809810-60-4	809810-61-5	809810-62-6
809810-63-7	809810-64-8	809810-65-9	809810-66-0	809810-67-1
809810-68-2	809810-69-3	809810-70-6	809810-71-7	809810-72-8
809810-73-9	809810-74-0	809810-75-1	809810-76-2	809810-77-3
809810-78-4	809810-79-5	809810-80-8	809810-81-9	809810-82-0
809810-83-1	809810-84-2	809810-85-3	809810-86-4	809810-87-5
809810-88-6	809810-89-7	809810-90-0	809810-91-1	809810-92-2
809810-93-3	809810-94-4	809810-95-5	809810-96-6	809810-97-7
809810-98-8	809810-99-9	809811-00-5	809811-01-6	809811-02-7
809811-03-8	809811-04-9	809811-05-0	809811-06-1	809811-07-2
809811-08-3	809811-09-4	809811-10-7	809811-11-8	809811-12-9
809811-13-0	809811-14-1	809811-15-2	809811-16-3	809811-17-4
809811-18-5	809811-19-6	809811-20-9	809811-21-0	809811-22-1
809811-23-2	809811-24-3	809811-25-4	809811-26-5	809811-27-6
809811-28-7	809811-29-8	809811-30-1	809811-31-2	809811-32-3
809811-33-4	809811-34-5	809811-35-6	809811-36-7	809811-37-8
809811-38-9	809811-39-0	809811-40-3	809811-41-4	809811-42-5
809811-43-6	809811-44-7	809811-45-8	809811-46-9	809811-47-0
809811-48-1	809811-49-2	809811-50-5	809811-51-6	809811-52-7
809811-53-8	809811-54-9	809811-55-0	809811-56-1	809811-57-2
809811-58-3	809811-59-4	809811-60-7	809811-61-8	809811-62-9
809811-63-0	809811-64-1	809811-65-2	809811-66-3	809811-67-4
809811-68-5	809811-69-6	809811-70-9	809811-71-0	809811-72-1
809811-73-2	809811-74-3	809811-75-4	809811-76-5	809811-77-6
809811-78-7	809811-79-8	809811-80-1	809811-81-2	809811-82-3
809811-83-4	809811-84-5	809811-85-6	809811-86-7	809811-87-8
809811-88-9	809811-89-0	809811-90-3	809811-91-4	809811-92-5
809811-93-6	809811-94-7	809811-95-8	809811-96-9	809811-97-0
809811-98-1	809811-99-2	809812-00-8	809812-01-9	809812-02-0
809812-03-1	809812-04-2	809812-05-3	809812-06-4	809812-07-5
809812-08-6	809812-09-7	809812-10-0	809812-11-1	809812-12-2
809812-13-3	809812-14-4	809812-15-5	809812-16-6	809812-17-7
809812-18-8	809812-19-9	809812-20-2	809812-21-3	809812-22-4
809812-23-5	809812-24-6	809812-25-7	809812-26-8	809812-27-9

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809812-28-0	809812-29-1	809812-30-4	809812-31-5	809812-32-6
	809812-33-7	809812-34-8	809812-35-9	809812-36-0	809812-37-1
	809812-38-2	809812-39-3	809812-40-6	809812-41-7	809812-42-8
	809812-43-9	809812-44-0	809812-45-1	809812-46-2	809812-47-3
	809812-48-4	809812-49-5	809812-50-8	809812-51-9	809812-52-0
	809812-53-1	809812-54-2	809812-55-3	809812-56-4	809812-57-5
	809812-58-6	809812-59-7	809812-60-0	809812-61-1	809812-62-2
	809812-63-3	809812-64-4	809812-65-5	809812-66-6	809812-67-7
	809812-68-8	809812-69-9	809812-70-2	809812-71-3	809812-72-4
	809812-73-5	809812-74-6	809812-75-7	809812-76-8	809812-77-9
	809812-78-0	809812-79-1	809812-80-4	809812-81-5	809812-82-6
	809812-83-7	809812-84-8	809812-85-9	809812-86-0	809812-87-1
	809812-88-2	809812-89-3	809812-90-6	809812-91-7	809812-92-8
	809812-93-9	809812-94-0	809812-95-1	809812-96-2	809812-97-3
	809812-98-4	809812-99-5	809813-00-1	809813-01-2	809813-02-3
	809813-03-4	809813-04-5	809813-05-6	809813-06-7	809813-07-8
	809813-08-9	809813-09-0	809813-10-3	809813-11-4	809813-12-5
	809813-13-6	809813-14-7	809813-15-8	809813-16-9	809813-17-0
	809813-18-1	809813-19-2	809813-20-5	809813-21-6	809813-22-7

809813-23-8	809813-24-9	809813-25-0	809813-26-1	809813-27-2
809813-28-3	809813-29-4	809813-30-7	809813-31-8	809813-32-9
809813-33-0	809813-34-1	809813-35-2	809813-36-3	809813-37-4
809813-38-5	809813-39-6	809813-40-9	809813-41-0	809813-42-1
809813-43-2	809813-44-3	809813-45-4	809813-46-5	809813-47-6
809813-48-7	809813-49-8	809813-50-1	809813-51-2	809813-52-3
809813-53-4	809813-54-5	809813-55-6	809813-56-7	809813-57-8
809813-58-9	809813-59-0	809813-60-3	809813-61-4	809813-62-5
809813-63-6	809813-64-7	809813-65-8	809813-66-9	809813-67-0
809813-68-1	809813-69-2	809813-70-5	809813-71-6	809813-72-7
809813-73-8	809813-74-9	809813-75-0	809813-76-1	809813-77-2
809813-78-3	809813-79-4	809813-80-7	809813-81-8	809813-82-9
809813-83-0	809813-84-1	809813-85-2	809813-86-3	809813-87-4
809813-88-5	809813-89-6	809813-90-9	809813-91-0	809813-92-1
809813-93-2	809813-94-3	809813-95-4	809813-96-5	809813-97-6
809813-98-7	809813-99-8	809814-00-4	809814-01-5	809814-02-6
809814-03-7	809814-04-8	809814-05-9	809814-06-0	809814-07-1
809814-08-2	809814-09-3	809814-10-6	809814-11-7	809814-12-8
809814-13-9	809814-14-0	809814-15-1	809814-16-2	809814-17-3
809814-18-4	809814-19-5	809814-20-8	809814-21-9	809814-22-0
809814-23-1	809814-24-2	809814-25-3	809814-26-4	809814-27-5
809814-28-6	809814-29-7	809814-30-0	809814-31-1	809814-32-2
809814-33-3	809814-34-4	809814-35-5	809814-36-6	809814-37-7
809814-38-8	809814-39-9	809814-40-2	809814-41-3	809814-42-4
809814-43-5	809814-44-6	809814-45-7	809814-46-8	809814-47-9
809814-48-0	809814-49-1	809814-50-4	809814-51-5	809814-52-6
809814-53-7	809814-54-8	809814-55-9	809814-56-0	809814-57-1
809814-58-2	809814-59-3	809814-60-6	809814-61-7	809814-62-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809814-63-9	809814-64-0	809814-65-1	809814-66-2	809814-67-3
	809814-68-4	809814-69-5	809814-70-8	809814-71-9	809814-72-0
	809814-73-1	809814-74-2	809814-75-3	809814-76-4	809814-77-5
	809814-78-6	809814-79-7	809814-80-0	809814-81-1	809814-82-2
	809814-83-3	809814-84-4	809814-85-5	809814-86-6	809814-87-7
	809814-88-8	809814-89-9	809814-90-2	809814-91-3	809814-92-4
	809814-93-5	809814-94-6	809814-95-7	809814-96-8	809814-97-9
	809814-98-0	809814-99-1	809815-00-7	809815-01-8	809815-02-9
	809815-03-0	809815-04-1	809815-05-2	809815-06-3	809815-07-4
	809815-08-5	809815-09-6	809815-10-9	809815-11-0	809815-12-1
	809815-13-2	809815-14-3	809815-15-4	809815-16-5	809815-17-6
	809815-18-7	809815-19-8	809815-20-1	809815-21-2	809815-22-3
	809815-23-4	809815-24-5	809815-25-6	809815-26-7	809815-27-8
	809815-28-9	809815-29-0	809815-30-3	809815-31-4	809815-32-5
	809815-33-6	809815-34-7	809815-35-8	809815-36-9	809815-37-0
	809815-38-1	809815-39-2	809815-40-5	809815-41-6	809815-42-7
	809815-43-8	809815-44-9	809815-45-0	809815-46-1	809815-47-2
	809815-48-3	809815-49-4	809815-50-7	809815-51-8	809815-52-9
	809815-53-0	809815-54-1	809815-55-2	809815-56-3	809815-57-4
	809815-58-5	809815-59-6	809815-60-9	809815-61-0	809815-62-1
	809815-63-2	809815-64-3	809815-65-4	809815-66-5	809815-67-6
	809815-68-7	809815-69-8	809815-70-1	809815-71-2	809815-72-3
	809815-73-4	809815-74-5	809815-75-6	809815-76-7	809815-77-8
	809815-78-9	809815-79-0	809815-80-3	809815-81-4	809815-82-5
	809815-83-6	809815-84-7	809815-85-8	809815-86-9	809815-87-0
	809815-88-1	809815-89-2	809815-90-5	809815-91-6	809815-92-7
	809815-93-8	809815-94-9	809815-95-0	809815-96-1	809815-97-2
	809815-98-3	809815-99-4	809816-00-0	809816-01-1	809816-02-2
	809816-03-3	809816-04-4	809816-05-5	809816-06-6	809816-07-7

809816-08-8	809816-09-9	809816-10-2	809816-11-3	809816-12-4
809816-13-5	809816-14-6	809816-15-7	809816-16-8	809816-17-9
809816-18-0	809816-19-1	809816-20-4	809816-21-5	809816-22-6
809816-23-7	809816-24-8	809816-25-9	809816-26-0	809816-27-1
809816-28-2	809816-29-3	809816-30-6	809816-31-7	809816-32-8
809816-33-9	809816-34-0	809816-35-1	809816-36-2	809816-37-3
809816-38-4	809816-39-5	809816-40-8	809816-41-9	809816-42-0
809816-43-1	809816-44-2	809816-45-3	809816-46-4	809816-47-5
809816-48-6	809816-49-7	809816-50-0	809816-51-1	809816-52-2
809816-53-3	809816-54-4	809816-55-5	809816-56-6	809816-57-7
809816-58-8	809816-59-9	809816-60-2	809816-61-3	809816-62-4
809816-63-5	809816-64-6	809816-65-7	809816-66-8	809816-67-9
809816-68-0	809816-69-1	809816-70-4	809816-71-5	809816-72-6
809816-73-7	809816-74-8	809816-75-9	809816-76-0	809816-77-1
809816-78-2	809816-79-3	809816-80-6	809816-81-7	809816-82-8
809816-83-9	809816-84-0	809816-85-1	809816-86-2	809816-87-3
809816-88-4	809816-89-5	809816-90-8	809816-91-9	809816-92-0
809816-93-1	809816-94-2	809816-95-3	809816-96-4	809816-97-5

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT	809816-98-6	809816-99-7	809817-00-3	809817-01-4	809817-02-5
	809817-03-6	809817-04-7	809817-05-8	809817-06-9	809817-07-0
	809817-08-1	809817-09-2	809817-10-5	809817-11-6	809817-12-7
	809817-13-8	809817-14-9	809817-15-0	809817-16-1	809817-17-2
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	809817-38-7	809817-39-8	809817-40-1	809817-41-2	809817-42-3
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	809817-53-6	809817-54-7	809817-55-8	809817-56-9	809817-57-0
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	809817-63-8	809817-64-9	809817-65-0	809817-66-1	809817-67-2
	809817-68-3	809817-69-4	809817-70-7	809817-71-8	809817-72-9
	809817-73-0	809817-74-1	809817-75-2	809817-76-3	809817-77-4
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	809817-98-9	809817-99-0	809818-00-6	809818-01-7	809818-02-8
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	809818-08-4	809818-09-5	809818-10-8	809818-11-9	809818-12-0
	809818-13-1	809818-14-2	809818-15-3	809818-16-4	809818-17-5
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809819-33-8 809819-34-9 809819-35-0 809819-36-1 809819-37-2  
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809821-68-9 809821-69-0 809821-70-3 809821-71-4 809821-72-5  
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 809824-03-1 809824-04-2 809824-05-3 809824-06-4 809824-07-5  
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RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses) (amino acid sequence; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 9005-53-2P, Lignin, preparation 11078-30-1P, Galactomannan

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(improved production of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

IT 7723-14-0, Phosphorus, biological studies 7727-37-9, Nitrogen, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(improved use and/or uptake of; nucleic acid mols. and encoded proteins associated with maize and their uses for plant improvement)

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